INDEX TO VOL. 210

NAMES

A

A.E.I. Heavy Plant Division, Turbo-electric Propulsion of S. S. "Canberra", 831
A.E.I. Radio and Electronic Components Division, Cadmium Sulphide Photocells as Radiation Monitors, 75
A.E.I. Telecommunications Division, Telephone Development in Scotland and Midlands, 39
Abbott, R. A. S., The "Shay" Geared Steam Locomotive, 1879-1945, 1041
Abell, C., Last of the Few, 1018
Acbars, Ltd., Heavy-duty Chucking Automatic Lathe, 19
Acheson Colloids, Ltd., Overhead Crane Wheel Flange Lubrication, 850
Acton Society Trust, Retirement, 1027
Adams, J. C., Angle of Approach Indicators, 890
Adcock and Shipley Ltd., Milling Machines, 20
Adshed, Thos., and Son, Ltd., Mobile Plate Lifting Machine, 211
Advisory Council on Research and Development, 110
Advisory Council on Scientific Policy, Review of Research Activities, 575
Aero Controls Ltd., Flexible Couplings for Pipes, 457
Aeronautical Research Laboratories, Australian Aeronautical Researches, 1056
Agricultural Engineers Association, Agricultural Machinery Exports, 644; Agricultural Training Centre, 566
Ahmed, A. Aziz, Aswan High Dam, 1052
Air Logistics Corporation, Turbine Engine Handling System, 766
Albright and Wilson (Mfg.) Ltd., Moulded Circuit Boards, 74
Alcan Industries Ltd., Expansion of Rogerstone Aluminium Strip Mill, 635
Alexander, George H., Machinery Ltd., Three-dimensional Automatic Diesinking Machine, 15
Alimak Verken, A. B., Self-climbing Lift, 682
Allaway, P. H., Foundation for Roll Grinding Machines, 457
Allday, William, and Co., Ltd., Small Vacuum Pump Set, 1025
Allen, Edgar, and Co., Ltd., Wages and Industrial Relations, 286
Allen, John E., Rockets and Space Flight up to 1960, 92, 132
Allen, W. H., A Prize-giving Worth Reporting, 865
Allgemeine Elektricitas-Gesellschaft, Centralised Automatic Data Processing, 773; Continuous Measurement of Density by means of Gamma Ray Absorption, 773; Transistorised Controller with Proportional and Integral Action, 773
Allis-Chalmers, Great Britain, Ltd., Four-wheel Drive Tractor Shovel, 798; Four-wheel General-purpose Agricultural Tractor, 930
Allweather Paints Ltd., Rust Removal, 564
Aluminium Company of America, 14,000 ton Extrusion Press in Indiana, 572
Aluminium Company of America and Westinghouse Electric Corporation, 6000kW Silicon Rectifier for Aluminium Smelting, 571
American Concrete Institute, Fatigue of Concrete, 820
American Grease Stick Company, Dispenser for Rubber Lubricant with Storage for Brush and Mop, 720
American Tool Works Company, Openside Boring and Drilling Machine, 857
Amigo Machine Company Ltd., Bow-moulding Machine, 1065
Andrews, W. P., Concrete and Soil-cement roads, 277
Anthony Company, Frameless Tipping Trailer, 808
Apaseal Ltd., Plug for a Puncture in a Tubeless Tyre, 720
Arbeits und Forschungsgemeinschaft für Stadtverkehr und Verkehrssicherheit, Safety on the Roads, 910
Archdale, James, and Co., Ltd., Drilling and Tapping Machine with Automatic Indexing Table, 249; Horizontal Co-ordinate Drilling Machine, 54
Arkless, G. F., Industrial Value of D.S.I.R. Research, 466
Armstrong Whitworth (Metal Industries), Ltd., Extension to a Roll-making works, 1064
Armstrong Whitworth, Sir W. G. (Aircraft), Ltd., Miniature Flowmeter for Very Slow Speeds in Water, 774; Nord CT-41 Target Drone, 421
Arnot, W. D., Contacting the Unconscious, 974
Asbrink, A. B., and Co., Hydrostatic Transmission Acting as a Clutch Tolerating Indefinite Slip, 599
ASEA, Heavy Locomotive for Ore Line, 952; 375/MVA, High-voltage Transformer, 217; Slipring-free Torque Gauge, 993
Ashworth Ross and Co., Weight Recorder, 474
Aspera Motors, Engines for Europe, 220
Assam, Umiam Hydro-electric Project, 991
Associated Electrical Industries Ltd., A.C. Locomotive with Rheostatic Braking, 732; Air-blast Circuit Breaker for Roof Mounting on Locomotives, 592; Cross-channel Power Cable, 154; Manufacture of Heavy Electric Equipment, 288; Motors for A.C. Locomotives, 213; Productivity in Computing, 111; Summer School in Electrical Engineering, 153; Undercar Main Transformer, 591; Electric Locomotives for South Africa, 358
Associated Feed Manufacturers Ltd., Animal Feeding Stuffs Mill in Belfast, 722.
Association of British Chambers of Commerce, British Trade Fair, Moscow, 769; Transport, 1066
Association of Light Alloy Refiners and Smelters Ltd., Aluminium Scrap, 686
Ateliers et Chantiers de France, Oil Tanker Fitted with Stabilisers, 902
Athenia Steel Division National-Standard Company, Cold Rolling Mill Expansion in New Jersey, 651
Atlas Copco Ltd., "Ladder" Drilling for Rock Tunnelling, 947
Atlas Copco Greece, Tannery Effluent Purification, 444
Atlas Lighting Ltd., Fluorescent Lighting Equipment Production, 803
Atlas-Werke, A.G., Mass Spectrometer, 771
Atomic Energy Establishment, Winfrith, "Hector" Research Reactor, 472; Progress at Winfrith Atomic Energy Establishment, 490
Atomic Energy Research Establishment, Solid State Physics Division, Harwell, 562
Atomic Weapons Research Establishment, Plutonium-in-air Monitor, 320
Atomics International, Kinetic Experiment on Water Boilers, 571
Auto Diesels Ltd., Air Bleed Turbines, 409
Automotive Products Company, Ltd., Hydrokinetic Retarder Installation, 598
Avco Corporation, 30kW Arc Jet Rocket Engine, 384
Avelev Electric Ltd., Microwave Components, 1060

B

B. and B. Trailers Ltd., Self-acting Trailer Brake, 1025
B.P. Benzine und Petroleum A.G., Dinslaken Refinery, 910
B.S.A. Tools Ltd., Automatic Chucking Multi-spindle Automatic, 62; Copy Turning Lathe, 61
Bailey Meters and Controls Ltd., Monitoring System with Digital Printer, 810
Bailey, Sir W. H., and Co., Ltd., Flow Indicators for Opaque Liquids, 1061
Balding Engineering Ltd., Vertical Universal Head Milling Machine, 58
Bamford, J. C., (Excavators) Ltd., Hydraulic Excavator, 797
Barber-Greene Olding and Co., Ltd., Ditching Machine, 836
Barker, T. C., Pilkington Brothers and the Glass Industry, 353
Barnaby, K. C. B., The Institution of Naval Architects, 1860-1960, 758
Barnes Drill Company, Single-spindle Honing Machine, 914
Batchelors Ltd., Bottling Plant in Dublin, 212
Bayley, E. G., Practical Training for Engineers, 758
Beckingsale, A. A., Engineers and Industrial Accidents, 459
Belcher, G. L., Tests on Eccentrically Loaded Riveted Joints, 177
Bell System, Satellite System for World-wide Communications, 518
Bell Telephone Laboratories, Electronic Telephone Central Office, 1071; Gallium Arsenide Diodes, 412; Gallium Phosphide Single Crystals, 955; Optical Maser Used in Communication Experiments, 1035
Belling and Lee Ltd., Plug-and-socket Connectors, 564
Bendix Corporation, Numerical Contouring System, 915
Benedikt, Otto, Nomographische Methode der Berechnung Komplizierter und Stark Gesattigter Magnetischer Kreise Electrischer Maschinen, 241
Benson, Cyril S., Advanced Structural Design, 25
Benson, R. S., Experiments on a Piston Controlled Port, 875
Berger, Lewis, (Great Britain) Ltd., Vehicle Refinishing, 513
Bettess, F., Mass Haul Curve, 341
Birmingham City Council, Birmingham Science Museum, 729
Birmingham City Water Department, How to Save Money by Saving Water, 921
Birmingham University, Department of Mechanical Engineering, Conference on Machine Tool Design and Research, 208
Black, Stewart C., Ross Motorway, 1052
Blackwood Hodge & Co., Ltd., Euclid Twin-powered Scraper, 835
Blake, J. P. H., Resonance Integral Calculations for High-temperature Reactors, 213
Blaw Knox Ltd., Pan Mixer for Concrete, 510
Board of Trade, Capital Expenditure, 252, 476; Construction Work Overseas, 442; Engineering Production, 252, 442; Engineering Statistics, 769; Import and Export Prices, 286; Industrial Building, 605; Overseas Trade, 42, 252, 404, 605, 733, 949
Boeing Airplane Company, Gas Turbines in Japan, 572
Bolland, R. B. W., Bridge Launcher of Light Alloy, 276
Bolton Turntable Company, Ltd., Industrial Turntable in Paper Mill, 365
Booth, James, Aluminium, Ltd., Equipment for Aluminium Works at Kitts Green, 39
Booth, K. E., and W. S. Cartwright, Electric Overhead Travelling Cranes, 789
Bosch, Robert, G.m.b.H., Measurement of Pedal Force, 910
Boulton and Paul Ltd., Composite Construction using High-tensile Steel "H"-beams, 944
Bowdler, H., Motorways: Some Constructional Problems, 630
Boydell, E., and Co., Ltd., Six Cubic Yard Dumper, 835
Braham, Patterson and Benham, Ltd., Gas-fired Mastic Asphalt Transporter, 799
Bray Construction Equipment Ltd., Armour for Tyres, 1061
Bristol Aeroplane Company, The Last of the Few, 785
Bristol Aeroplane Plastics Ltd., Reinforced Plastic Pipe System, 1017
Bristol Aircraft Ltd., Guided Weapons Laboratory, X-ray Spectrometer for Satellite, 849; Mobile Staging, 284
Bristol-Siddeley Engines Ltd., New Aero Engine, 278
British Aluminium Company, Aluminium Planking for the Construction of Truck Bodies, 596
British Arca Regulators Ltd., High-pressure Diaphragm-operated Valves, 440
British Association, 501; Engineers at the British Association, 451
British Association for the Advancement of Science, A Scientist on Engineers, 379; Annual Meeting at Cardiff, 463
British Association for Commercial and Industrial Education, Training Young People, 566
British Broadcasting Corporation, Prototype Television Camera, 438
British Computer Society Ltd., Computer Conference in Harrogate, 153
British Electrical and Allied Manufacturers' Association, Railway Electrification, 1114
British Employers Confederation, Education for Industry, 324
British Ermeto Corporation Ltd., Balanced Stop Valves, 22, 424
British Hydromechanics Research Association, Fluid Seals, 366
British Institute of Management, Management Development Schemes, 988
British Institution of Radio Engineers, Radio Convention on Space Research, 400
British Insulated Callender's Cables Ltd., Cross-channel Power Cable, 154; Overhead Equipment Components, 624; Fault Monitor for Floor Warming Cables, 439; Pantograph Current Collection Studies, 679; Railway Electrification Cable, 905
British Interplanetary Society, Symposium on Communications Satellites, 1067
British Iron and Steel Federation, Steel Industry Expenditure, 324
British Iron and Steel Research Association, Automation in the Steel Industry, 696; Metal-sprayed Structural Steelwork, 110
British Motor Corporation Ltd., Annual General Meeting, 907; Mobile Service Training Unit, 436
British Non-Ferrous Metals Research Association, Better Plating on Die Castings, 236
British Overseas Airways Corporation, B.O.A.C. and Supersonics, 263
British Oxygen Company Ltd., Torch for Spot-welding from One Side of Work, 721
British Oxygen Engineering Ltd., Carbide and Acetylene Plant in Northern Ireland, 40
British Petroleum Company Ltd., World Oil Industry, 282
British Productivity Council, Conference on Data Processing, 1023
British Railways, Harlow Town Station, 155
British Railways Electrification Conference, 587; Equipment for Railway Electrification, 560
British Road Federation Ltd., Basic Road Statistics, 530
British Shipbuilding Research Association, 845
British Standards Institution, 512; Standards Associates, 320
British Transport Commission, Electronics in Transport, 563; The B.T.C. in 1959, 49
British Welding Research Association, Keeping Research in Touch with Needs, 452; Symposium on Pressure Vessel Research towards Better Design, 1061
British Wire Products Ltd., "Helicoid" Gauge, 720
Britten-Norman Ltd., Annular Jet Ground Effect Machine, 34
Broadbent, Henry, Ltd., Heavy Duty Crankshaft Turning Lathe, 249
Broken Hill Pty. Ltd., Australia's Secondary Industries, 702
Bronx Engineering Company Ltd., Pinch Pyramid Plate Bending Rolls, 942
Brookhaven National Laboratory, Alternating Gradient Synchrotron, 446, 481
Brookman, R. S., Ltd., Special Purpose Drilling Set-ups, 13
Brown, Boveri and Cie, Planing Machine with Contactless Control of the Table Drive, 774
Brown Brothers and Co., Ltd., Rotary Vane Steering Gear, 565
Brown, David, Industries, Ltd., Six-speed Gearbox in Overdrive form, 597; Worm Gear Units, 602
Brown, David, Tractors, Ltd. Tractor Engine Exhaust Brake, 973
Brown, H. F., Diesel Locomotives in the United States, 926
Brown and Sharpe Manufacturing Company, Tape-controlled Cam Milling Machine, 913
Brush Electrical Engineering Company, Ltd., Motor Coach Rectifier Transformer, 561
Budd, Wm. C., Last Southampton Paddle Steamer, 193
Building Research Station, Building Research, 1959, 279
Bullows, Alfred, and Sons, Ltd., Compressed Air Filters, 946
Burke, E. V., Dock and Harbour Engineering, 239
Burmeister and Wain, A/S., 25,000 b.h.p. Marine Diesel Engine, 1032
Burnby, M. W., Railway Chaos, 891
Burrows and Smith Ltd., Gear Deburring Machine, 1063
Butters Brothers and Co., Limited, 100-ton Travelling Monotower Shipyard Crane, 385
Buxton, H. F., Notable Locomotives of 1910, 593

C

Caldecote, Lord, "Electrics" and Electronics in Aircraft, 897
"Callipides", Road Accidents, 631
Callow, F. E., (Engineers) Ltd., Mobile Pneumatic Conveying Equipment, 1062
Calor-Emag, Explosion Fuse, 992
Calor Gas (Distributing) Company, Ltd., Liquefied Petroleum Gas for Engines, 565; Spark Ignition Torch, 726
Camill Engineering Company Ltd., Articulated Dump Truck, 947
Canada Iron Foundries Ltd., An Oil Hydraulic System for Tunnelling Shields, 750
Cannon, C. G., Electronics for Spectroscopists, 241
Cantiere Navale Leopoldo Rodriquez, Hydrofoil Boat for Stockholm—Mariehamn Service, 993
Cartwright, W. S., and K. E. Booth, Electric Overhead Travelling Cranes, 789
Case, J. I., Company, Ltd., "Terramatic" Transmission, 837
Catchpole Engineering Company, Ltd., Self-emptying Carrier Beet Harvester, 72
Catmur Machine Tool Corporation Ltd., Automatic Feed Attachment for Presses, 58; Automatic Tape Controlled Drilling Machine, 58
Cellon Ltd., Farm Machinery Finishes, 158
Cement and Concrete Association, Prestressed Concrete Development Group, Standardised Bridge Beams in Prestressed Concrete, 507
Central Electricity Generating Board, Annual Report, 557; Electricity Bulk Supply Tariff, 1114; 400kV Supergrid, 1023; Heating of Power Station Buildings, 443; North Eastern Division, Blyth "A" Power Station, 28; Nuclear Power Station for Anglesey, 1023; Nuclear Power Station Sites in Anglesey, 281; Oldbury Nuclear Power Station, 728; Radioactive Isotopes from Reactors?, 823; Supercritical Generating Units for Drakelow-C Power Station, 313
Central States Can Corporation, Deep-drawn Aluminium Cans, 1072
Centre International de Developpement de l'Aluminium, Aluminium in Rolling Stock Exhibition, 44
Chambon (Park Royal) Ltd., Improved Braille Printing, 848

Chandler, K. W., G. C. C. Parker and T. Furman, Edge Cracking of a Steel Band Conveyor, 1099
Charlton, T. M., Contribution of Navier and Clebsch to the Theory of Statically-indeterminate Frames, 712
Chief Inspector of Mines and Quarries, Gas Explosions in Mines, 453
Chrysler International, S.A., Refrigeration, Air Conditioning and Heating Equipment, 245
Chrysler International, Special Products Division, Reverse-cycle Refrigeration, 941
Churchill Gear Machines Ltd., Semi-automatic Universal Gear Shaving Machine, 54
Churchill Instrument Company, Ltd., Temperature Controlled Water Circulator, 732
Churchill, V. L., Optical Suspension Alignment Calibration, 600
Cincinnati Milling Machine Company, Bridge Type Profile and Contour Milling Machine, 913; Cylindrical Grinding Machine, 858
Cincinnati Shaper Co., 24ft. long Hydraulic Press Brake, 778
Citrine, Lord, Controls in Industry, 685
Citroen Company, New Citroen Plant, 445
Civil Aviation Signals Training Establishment, Signals Training for Civil Aviation, 36
Civil Service Commissioners, Recruitment of Scientists and Engineers to Government Service, 616
Clark's Press Equipment Ltd., Strip Oiling Device, 1064
Clausen, Hugh, First Machine Tool Design and Research Conference, 629
Clayton Dewandre Company, Ltd., Air Powered Hydraulic Servo, 209
Clean Air Council, Appointments, 362
Clean Rivers (Estuaries and Tidal Waters) Act, Estuarial Clean-up, 379
Cockburns Ltd., "Nuclear Clean" Valves, 1064
Cohen, George, Sons and Co., Ltd., Downstroking Hydraulic "Barnes" Press, 13
Cold-Forging Ltd., and A. Nothelfer and Sohne, Complete Cold-forging Installation, 649
Coleman, D. R., Germanium and Silicon Power Rectifiers, 838
Collico Ltd., Load Handling Trollies, 765
Colt Ventilation Ltd., Adjustable Ventilator, 77
Commissariat à l'Energie Atomique, French Nuclear Developments, 853
Committee on Coal Derivatives, Report, 319
Commonwealth Telecommunications Board, Report, 845
Condit, Carl W., American Building Art—The Nineteenth Century, 314
Confederation of Shipbuilding and Engineering Unions, Engineering and Shipbuilding Wages, 42
Consolidated Pneumatic Tool Company, Ltd., Pneumatic Sawing or Filing Tool, 947; Torque Controlled Impact Wrench, 460
Constantine, T., Small Laboratory Ship Testing Plant, 710
Construction Engineering Association, Getting the Best Out of Coal, 643
Conveyancer Fork Trucks Ltd., Elevating and Tipping Equipment, 37
Copper Development Association, Water-cooled Copper Conductors, 699
Coradi, G., A.G., Universal Drafting Table with Electronic Positioning, 771
Corbett, R. H., and Co., Ltd., Fork Truck Load Clamps, 440
Corbyn, D. B., Germanium and Silicon Power Rectifiers, 669
Council of British Manufacturers of Petroleum Equipment, Mission to the Argentine and Chile, 476
Council of Industrial Design, Design Appreciation for Engineers, 416
Council of Ironfoundry Association, Pneumoconiosis Survey, 159
Counting Instruments Ltd., Display Unit, 731
Coventry Climax Engines Ltd., Pump of the Simms Manifold Iniection System, 721; Two New Engines, 721
Coventry Controls Ltd., Thermal Relays, 634
Coventry Gauge and Tool Company, Ltd., Large Special Purpose Contour Milling Machine, 985; "Matrix" Grinding Machines, 9; Precision Cylindrical Grinding Machine, 322
Cowans Sheldon and Co., Ltd., 250-ton Diesel Railway Breakdown Crane, 753
Cowley, D. M., Interchangeability of Shanks and Squares, 351
Cox, M., and E. Glenny, Thermal Fatigue Investigations, 346
Crane Packing Ltd., Heat Exchange Unit, 215
Cranes (Dereham) Ltd., Charge Face Transporter, 1065; Trailer, 528
Craven Brothers (Manchester) Ltd., Large Unit-construction Lathe, 809; Railway Wheel Lathe, 906
Cravens Ltd., New London Transport Underground Trains, 844
Crawthorne Engineering Company, Ltd., 36in. Swing Gap Bed Lathe, 57
Crompton Parkinson Ltd., A.C. Drives for Two Bascule Bridges, 945; Self-ventilated Axle-hung Traction Motor, 561; "Vintage" Electric Motor for Indian Museum, 75
Cross Company, Transfer Machines for High-precision Finishing Operations, 219; Transfer Machining of Tractor Rear Axle Housing, 165
Crowther Report, Youth Employment and Further Education, 159
Cummins Engine Co., Ltd., 5½in. by 6in. Diesel Engines, 837
Cyanamid of Great Britain Ltd., Chemical Grout, 38
Czerni, S., English-Polish Dictionary of Mechanical Engineering, 277

D

Daimler-Benz, A.G., Truck, 527
Daimler Company, Ltd., Low-height Double-deck Buses, 526
Danly Machine Specialities, Inc., Heavy-duty Presses, 114; Mechanical Press with Automatic Slide Positioner, 778
Darwins Ltd., Permanent Magnet Chuck, 902
Davey, Paxman & Co. Ltd., "No-break" Supply for Norwegian Telecommunication Services, 475; Works Heat Pump, 250
Davies, Ernest, Roads and Their Traffic, 352
Davies, R., and J. M. Hawkes, Measuring the Workability of Concrete, 392
Davis, Stuart, Ltd., Fine Boring Machines, 11
Davison, C. St. C., Evolution of the Workshop Micrometer, 196
Dawe Instruments Ltd., Ultrasonics in Gold Plating Process, 1063
Day, W. D., Introduction to Laplace Transforms for Radio and Electronic Engineers, 839
Dayton, J. E., Competitive Design and the Road Problems, 601
De Bray, Roy G., Thousands of Millions of Pounds to be Saved?, 838
Decca Radar Ltd., Improved Marine Radar Series, 802
Deckel, Friedrich, Universal Boring Mill with Inclined Bed, 569
Del Mar Engineering Laboratories, Towed Target Systems, 903
Delapena and Son, Ltd., Induction Heating and Honing Equipment, 59; Standard Indexing Fixture, 59
Delft Technical University, European Course in Sanitary Engineering, 44
Dennis Bros., Ltd., "Vendor", 526
Department of Scientific and Industrial Research, Ergonomics in Industry, 512; Grants for Space Research, 279; Report on Shipbuilding and Marine Engineering Industries, 1039; Road Research, 1959, 551; Shipbuilding Criticised, 615
Deutsche Shell A.G., Gordorf Refinery Opened, 517
DeVlieg Machine Company, Horizontal Boring and Milling Machine, 914
Dick, J. E., Industrial Telemetry, 748
Diesel Engineers and Users Association, Latent Heat Cooling and Waste Heat Recovery in Diesel Engines, 824
Distillers Company, Ltd., Breakdown Agent for Carbon Dioxide/Sodium-silicate Moulding, 211
Dobson, R., Practical Training for Engineers, 714
Dockers Brothers, "Colortard", 554
Dodge Bros. (Britain) Ltd., Six-wheeler Chassis, 527; 9-ton Truck, 527
Dorman Long and Co., Ltd., Steel Sheets with All-over Plastics Coating, 984
Dorman Long (Steel) Ltd., Development Programme; 733; Steel Plant Expansion, 115
Douglass, M. J., Thousands of Millions to be Saved?, 1018
Doulton Industrial Porcelains Ltd., Compressed Air Filter, 1062
Dowty Fuel Systems Ltd., "Vapour Core" Pump, 423
Dowty Mining Equipment Ltd., Hydraulic Pit Props for Temporary Floor Strengthening, 1113
Doxford, William, and Sons, (Engineers) Ltd., Doxford "P" Range of Engines, 31
Dunlop Rim and Wheel Company, Ltd., "Standby" Wheel, 722; Vacuum Booster with Mechanical Input and Output, 722
Dunlop Rubber Company, Ltd., Conveyor Belting Development Laboratory, 109
Du Pont Company (United Kingdom) Ltd., Neoprene Production Plant at Londonderry, 244
Du Pont de Nemours International, S.A., Resistor Compositions, 1059
Durham, John, Telegraphs in Victorian London, 428
Durham Raw Materials Ltd., Surface Treatment for Aluminium, 565
Durrant, A. E., British Steam Locomotive since 1900, 974

E

E.M.I. Electronics Ltd., Vidicon Tubes, 1060
Eastern Region of British Railways, Multiple-unit Trains for Suburban Electrification, 667; Railway Electrification Changeover, 803; Diesel Locomotive Maintenance Depot, 509
Economic Commission for Europe, Water Pollution Control in Europe, 293
Eden, J. F., and R. H. Wood, Stiffness of a Crane Jib, 181
Eden Fisher (Southend) Ltd., Printing THE ENGINEER at Southend, 602
Edisbury, J. R., Trav-o-lator, 758
Edmonds, R., Progress of the Park Lane Improvement Scheme, 838
Edwards, A. T., and T. D. Northwood, Experimental Studies of the Effects of Blasting on Structures, 538
Edwards, F. J., Ltd., Horizontal All-steel Section Rolling Machine, 59
Ehricke, Krafft, Space Flight Vol. 1, Environment and Celestial Mechanics, 352
Electric Resistance Furnace Company, Ltd., Brazing Paste Applicator, 20; Small Closed Quench Furnace, 811; Small Size Closed Quench Furnace, 20
Electrical Research Association, Revision of E.R.A. Committee Structure, 562
Electro Mechan-Heat Ltd., Small Spot Welding Machines, 248; Spot Welder, 603
Elcontrol Ltd., Automatic Water Sampler, 905; Automatic Weight Control, 366
Electronic Machine Company, Ltd., Electronic Level Measurement, 323
Elliott-Automation Ltd., Monitor for Recording Radio-activity in Water, 806
Elliott Brothers (London) Ltd., Future Techniques in Computing, 394; High Vacuum Equipment, 604; Selling Computers in Europe, 725; V.H.F. Communications, Navigation and Approach Facilities, 455
Ellis Hoult, A. Self-induced Ventilation of Road Tunnels, 25
Engineers' Guild, Professional Engineers' Earnings, 965; Remuneration of Engineers, 960; The Professional Engineer, 1027
English Electric Aviation Ltd., High Speed Wind Tunnels, 676
English Electric, Babcock and Wilcox, Taylor Woodrow Atomic Power Group, Sizewell Nuclear Power Station, 936
English Electric Company, Ltd., Arc Welding Equipment, 906; Definite-time Earth Fault Relay, 850; New London Office Building, 401; Notchless Control and Silicon Rectifiers in Motor Coach, 601; "Packaged" Weatherproof Switching Station, 904; Punched Paper Tape Reader, 1115; Transformer Design and Testing, 664; Trip Circuit Supervision Relays, 63; Water Cooled Ignitron Frame for Locomotives, 591
English Electric Valve Company, Ltd., High-power c.w. Klystron, 1061; Vapor-cooled Valves, 78
Envopak Ltd., Seal for Re-usable Envelopes, 1026
Equipment and Engineering Company, Ltd., Device for Maintaining Oil Level in Inaccessible Engines, 600
Escoffery, C. A., and Werner Luft, Silicon Cells and Solar Energy, 316
Esso Petroleum Company, Ltd., Milford Haven Oil Refinery, 828; Oil Service Headquarters at Feltham, 205; Opening of Oil Refinery at Milford Haven, 805
Ets. Neyrpic, Turbodrilling of Exploratory Boreholes, 444
Eumuco Aktiengesellschaft für Maschinenbau, 3000-tonne, 8-station Transfer Press, 568
European Fair Company, Ltd., Floating Exhibition, 993
European Productivity Agency, European Technical Digests, 362; Report on Data Processing, 920
European Organisation for Nuclear Research (CERN), Computer, 910; Pneumatic Platform, 992
Evershed and Vignoles Ltd., Research and Industrial Polarograph, 848
Ex-Cell-O Corporation, Contouring Machine with Tape Control, 912

F

Fairbairn, Lawson, Combe, Barbour, Ltd., Constant Torque Variable Speed Reduction Unit, 112
Fairfield Shipbuilding and Engineering Company, Ltd., Centenary, 846; Stress Relieving Large Welded Bridge Girders, 201
Federation of British Industries, Industrial Trends, 685; Rating and Valuation, 988; Recruitment and Training, 367
Federation of Civil Engineering Contractors, Industrial Films, 1027; Use of the I.C.E. Conditions of Contract, 252
Feedback Ltd., Test Waveform Generator, 321
Ferguson, J. M., Electric Motor Drives for Industry, 716
Ferguson, W. V. P., K. J. MacKenzie, W. O. A. Morton, and G. F. J. Murray, Experimental Boiler for Fuel Oil Combustion Research, 548
Ferranti Ltd., Automatic Cutting of Transformer Core Plates, 966; Co-ordinate Inspection Machine, 21; Fault Locator for Transmission Lines, 761; Miniature Clip-on Meter, 76
Ferranti Electric, Inc., Variable Magnetostriction Delay Line, 730
Ferodo, Ltd., Vehicle Braking in Mountains, 601
Field, A. J., Railway Chaos, 974; Road Surfaces—Seeing and Driving, 758
Fire Cry-er Ltd., Self-contained Fire Alarm, 846
Fire Research Board, Fire Research, 1959, 473
Firth Cleveland Instruments Ltd., Flowmeters for Liquids, 284
Fischer and Porter Ltd., Flowmeter Calibration Equipment, 76
Flory, L. E., Electronic Control of Road Vehicles, 175
Fodens Ltd., Turbo-charged Two-stroke Engine for Vehicle Use, 528
Folland Aircraft Ltd., Ground Effect Research, 987
Ford Motor Company, Ltd., Fordson "Dexta" Tractor, 929; Fordson "Super Major" Tractor, 930; Share Bid from U.S.A., 907
Forster's Glass Company, Ltd., Glass Level Control, 1082
Fosdick Machine Tool Company, Precision Boring Machine, 856
Fox, Samuel, and Co., Ultra High Strength Steels, 238
Francis, A. J., Tests on Eccentrically Loaded Riveted Joints, 177
Francis, J. R. D., Hydrodynamic Drag of a Shallowly Pitted Surface, 532
French National Railways, Silicon Rectifiers in Main Line Service, 292
Frieseke and Hoepfner, G.m.b.H., Re-railing Equipment, 690
Fuller Electric Ltd., Oil Minimum Circuit Breakers, 590; Rectifier Transformers for Cross-channel D.C. Power Link, 682
Furman, T., K. W. Chandler and G. C. C. Parker, Edge Cracking of a Steel Band Conveyor, 1099

G

Galloway, D. F., Machine Tool Research, Design and Utilisation, 1081
Garner Motors Ltd., Thames "Trader", 596
Garwood, F., The Sampling of Traffic, 680
Gear Grinding Company, Ltd., Electronically-controlled Dividing Equipment, 18; Gear Grinding Machine, 19; Individual Base Circle Involute Measuring Machine, 18
General Electric Company, Limited, Automatic Testing Jig for Domestic Switches, 471; Double Rotor Hammermill, 798; Exporting Knowledge About Graphite, 725; Extended Range of Lifting Magnets, 732; Mechanised Assembly of Television Receivers, 203; Motor-cycle Police Radio, 212; "Nuclear Clean" Workshop at Erith, 675; Speech Transmission by Modulated Light Beam, 210; Twin-camshaft Tap-changer Assembly for Undercar Mounting, 590; Visual Glide Path Indicator, 456; Superconductivity and Radio Research, 996
General Electric Space Sciences Laboratory, Potable Water Supply in Sealed Vehicles, 46
General Precision Systems Ltd., Universal Automobile Simulator, 35
Gercke, M. J., Stiffness of a Crane Jib, 1108
Giddings and Lewis Machine Tool Company, Horizontal Boring, Drilling and Milling Machine, 860; Horizontal Contour Milling Machine, 859
Gill, S. S., and R. W. Lakin, Design of Reinforced Cylinder for Nuclear Reactor Pressure Vessel, 495
Girling Ltd., Tandem Master Cylinder 808
Gisholt Machine Company, Automatic Chucking Turret Lathe, 780; Automatic Turret Lathe, 779
Glenny, E., and M. Cox, Thermal Fatigue Investigations, 346
Globe Pneumatic Engineering Company, Limited, Air Motor Driven Winch, 320
Gloucester Railway Carriage and Wagon Company, Ltd., A Hundred Years of Railway Carriages and Wagons, 282
Glovers Chemicals Ltd., Chemical De-emulsification Agent, 402
Godfrey, Sir George, and Partners (Industrial), Ltd., Mechanical Torque Indicator, 1024; Screw Design Air Compressor, 940
Goodrich-High Voltage Astronautics Incorporated, Astronautical Propulsion and Power Conversion System, 257
Goodyear Tyre and Rubber Co., Sidewall Inflation, 424
Gray, G. A., Company, Planer Type Milling Machines, 859
Greenfield, A. A., Bridge Launcher of Light Alloy, 276
Greenham Ready Mixed Concrete Ltd., Ready-mixed Concrete Plant at Fulham, 40
Grippo Products Ltd., Wall Plugs, 284
Groiss, E. S., A. V. Posse and V. E. Touretski, 800kV D.C. Transmission System, Stalingrad-Donbass, 66

H

Hackbridge and Hewittic Electric Company, Ltd., Rotary Isolator Installation, 560
Haddon, J. D., Wind Forces on Multispan Roofs, 536
Halmatic Ltd., Large Moulded Resin-glass Hull, 363
Haltrac, Ltd., Lightweight Hoist, 78
Hamilton, W. R., (Plymouth) Ltd., Vibratory Hopper, 154
Hammond, Rolt, Civil Engineering Today, 315
Handley Page Ltd., H.P.115 Narrow Delta Project Aircraft, 454
Harris, P. K., and Sons Ltd., Diesel-electric Tug "Llanwern", 103
Harrison, P. W., and G. M. Severn, Instrument for Measuring Very Small Bores, 467
Harrison-Smith, J. L., Gas Turbines to Burn Wood Waste, 714
Hattingh, J., Steam Turbine Runaways, 240
Hawker Siddeley Aviation Ltd., Avro 748, 418; P. 1127 Flat-rising Jet V.T.O.L., 943
Hawker Siddeley Brush Turbines, Ltd., Turbine Manufacturing Works, 986
Head Wrightson and Co. Ltd., Direct Reduction of Iron Ore, 156
Hawkes, J. M., and R. Davies, Measuring the Workability of Concrete, 392
Heath, W. G., Distribution of Shear Stress in a Box Beam, 104
Heenan and Froude, Ltd., Automatic Wire and Strip Forming Machines, 13; Refuse Disposal Plant at Salford, 982
Hegenscheidt, Wilhelm, K.G. Underfloor Wheel Lathe for Railway Vehicles, 687
Hendriksen, E. E., Analysis of a Scaffolding Collapse, 793
Herbert, Alfred, Ltd., Turret Drilling Machine, 10; "2 D" Capstan Lathe, 10
Hesford, C. M., and Co., Ltd., Rover Trailer Winch, 972
Heston Aircraft and Associated Engineers Ltd., Optical Comparators, 285
Higdon, Archie, Mechanics of Materials, 891
High Voltage Engineering Corporation, 100 MeV Linear Electron Accelerator for the N.B.S., 519
Hilger and Watts, Ltd., Automatic X-ray Spectrometer, 948; Photoelectric Autocollimator, 63; Photoelectric Micrometer Microscope, 63
Hindustan Machine Tools (H.M.T.), Machine Tool Production, 288
Hinshelwood, Sir Cyril, The Royal Society Tercentenary Address, 140
Hinton, Sir Christopher, Evolution of Nuclear Power Plant Design, 225
Historic Commercial Vehicles Club, Historic Vehicles, 453
Hodge Clemco, Ltd., Portable Blast Cleaner, 76
Holfelder, O., Testing Heavily Loaded Plain Bearings, 504
Holloway, V. L., Bridge Launcher of Light-alloy, 240, 352
Holman Brothers, Ltd., Heavy Drifter, 798
Holman Brothers, (Proprietary) Ltd., Portable Thruster Rig for Rock Drills, 38

Holmes, W. C., and Co., Ltd., Butane/air Plant at Hereford, 981
Honeywell Controls, Ltd., Adaptable Multipoint Recorder, 1060; Electrical Null Indicator, 250; Integrator for Chart Recorders, 323
Hooton, William, Ltd., "Ploughrator", 72
Horsburgh, Patrick, The Vehicle: Instrument of Land Usage, 176
Horseley Bridge and Thomas Piggott, Ltd., Exports, 512
Howes, J. H., A Sensitive Direct-reading Pocket-size Gamma Dosimeter, 213
Hozelock, Ltd., Plastic Pipe Coupling, 1064
Hughes, D. H., and T. R. G. Williams, Problems Involved in the Development of Programmed Fatigue Testing, 703
Hughes, E. M., Occurrence of Sulphates in the Geological Succession, 660
Hughes International (U.K.), Ltd., Ultrafast Computer Diodes, 811
Humphris and Sons, Ltd., Equipment for the Manipulation, De-coiling, Fattening, Feeding, Cutting and Stacking of Coils of Strip Material, 11
Hunter Engineering Company, Production of Aluminium Bar Stock by Casting and Cold Extrusion, 258
Hunting Surveys, Ltd., Air Surveys in the Indus Catchment, 508
Hutchinson, A. C., Screwy Screw Threads, 503, 1108
Hydraulic Machinery Drives Limited, Hydraulically Driven Automatic Oscillating Device, 321
Hydraulics Research Board, Hydraulics Research, 1959, 247
Hydro-Electric Power Commission of Ontario, Coldwater 600kV Experimental Line, 273, 311
Hymatic Engineering Company, Billet Handling Equipment for Rotary Hearth Furnace, 945; Reducing Valves, 809

I

IBM United Kingdom Ltd., Business Data Processing System, 158; Miniature Computer Drum, 441
Imperial Chemical Industries Ltd., Flexible Hydraulic Hose, 215; "Plastics in Industry" Exhibition at Leningrad, 122; Poly-propylene in Production, 933; Water-repellent Lubricant, 75
Industrial Training Council, Conference, 988; Co-operation between Industry and Education, 733; Training Boys in Industry, 367
Industriforbundets Vattenvardsbyra, New Life for Polluted Lakes, 372
Insley Industrial Supply Company, Ltd., Needle Roller Tracks, 63
Institute of Metals, Autumn Meeting, 281; Nuclear Energy Committee, "The Metallurgy of Beryllium International Conference", 1961, 935
Institute of Road Transport Engineers, Institution Headquarters, 1060
Institution of Civil Engineers, Changes in Examinations, 686; Library of Computer Programmes, 686; The Two Aswan Schemes, 919; Traffic Engineering Study Group, Roundabouts and Traffic Signals, 930; Traffic Engineering Study Group, The Control of Car Parking, 113; Voting for an Institution Merger, 655
Institution of Electrical Engineers, Faraday Lecture, 1960/61, 508; Pulse Code Modulation, 796; Electronics in Medicine, 204; Microwave Measurement Techniques, 1024; Conference on Non-destructive Testing in Electrical Engineering, November, 1961, 198; Joint Meetings on Applications of Electricity in Aircraft, 765
Institution of Engineers, Australia, Water and Australia, 289
Institution of Engineers in Scotland, Formation, 1857, 961
Institution of Engineers and Shipbuilders in Scotland, Presidential Address, 601; "James Watt" Dinner, 656
Institution of Gas Engineers, Symposium on the Protection of Gas Plant, 364
Institution of Locomotive Engineers, Rheostatic Braking, 1024
Institution of Mechanical Engineers, Dounreay Fast Reactor, 978, 1011, 1046, 1105; "Mechanicals" at Dinner, 724; "Mechanicals" Get No Rate Relief, 919; "Mechanicals" in Ireland, 1; Practical Training for Engineers, 524; Successful Graduates Section Venture, 680; Symposium on Experience of Large Scale Industrial Vacuum Plant, 906
Institution of Metallurgists, The Study and Use of Metals, 757
Institution of Municipal Engineers, Engineers and Architects in Municipalities, 984; The Problem of Car Parking, 113; Voting for an Institution Merger, 655
Institution of Nuclear Engineers, Inaugural Dinner, 601
Institution of Production Engineers, Manipulation of Metals, 718
Institution of Water Engineers, Problems of Water Supply, 967
International Association for Bridge and Structural Engineering, Some Structural Engineering Advances, 4
International Association for the Exchange of Students for Technical Experience, Exchange of Students for Technical Experience, 769
International Atomic Energy Agency, General Conference, 646
International Combustion Products Ltd., Flash Drying, 726
International Computers and Tabulators Ltd., Mechanised Telephone Accounting, 110
International Conference on Large Electric Systems (C.I.G.R.E.), Large Electricity Supply Systems, 52
International Federation for Medical Electronics, Electronics in Medicine, 204
International Federation of Operational Research Societies, Second International Conference on Operational Research, 648
International Harvester Company of Great Britain Ltd., Self-propelled Combine Harvester, 971; 60 h.p. Crawler Tractor, 155
International Synthetic Rubber Company Ltd., Synthetic Rubber Developments, 438
Iraq, Basrah and Mosul Petroleum Companies Ltd., Oil Production in Iraq, 402
Iron and Steel Board, Iron and Steel, 1066; Iron and Steel Report, 512
Iron and Steel Holding and Realisation Agency, De-nationalisation of Steel, 1066
Iron and Steel Institute, Atmospheric Corrosion Sub-Committee, Corrosiveness of Indoor Atmospheres, 935
Ives, D. J. G., Theoretical Extraction, 27

J

Jarvis, R. G., Modernisation: Road, Rail or Both, 890
Jameson, J. L., Ltd., Large Turbine Disc Slot Broaching Machine, 494
Jellett, J. H., Last Southampton Paddle Steamer, 25, 428
Jenner, H. N., Road Accidents—B.S.S. 812—Methods of Testing Mineral Aggregates, 800
Johnson, Matthey and Co., Ltd., Purer Metals, 401
Joint British Committee for Stress Analysis, Stress Analysis Committee, 364
Joint Iron Council, Iron Castings, 404, 949
Jones, A. A., and Shipman Ltd., Collet Chuck, 322
Jones and Lamson Machine Company, Autotracer Lathe with Automatic Cycle Drum Control, 855
Johnson and Phillips, Ltd., Expulsion Fuse-switch Certified for 150MVA at 11kV, 157
Jonmil Building Developments, Ltd., Domestic Heat Pump, 902

K

Karrier Motors, Ltd., Refuse Collector, 799
Kastner, L. J., and J. B. McGarry, Mass Flow and the Mixing Process in Low-velocity Air-ejectors, 190
Kearney and Trecker Corporation, Tape-controlled Production Milling Machine, 912
Kearns, H. W., and Co., Ltd., Optical Depth Control for Horizontal Boring Machines, 765
Keeton Sons and Co., Ltd., Shearing Machines, 639
Keelavite Hydraulics, Ltd., Electro-hydraulics Servo Valve, 18
Kellogg Company, Cooling Air for Food Packet Sealing, 282
Kendall and Gent, Ltd., Plane Milling Machine, 61
Kennett Handling Equipment, Ltd., "Hydrahed", 72
Kestag, Centre Drill, 817
Kieserling, Th., and Albrecht, Two-roll Straightening Machine for Shafts, 609
King's Heath Engineering Company, Ltd., Automobile Brake-shoe Rolling Machine, 731
Kirschbaum, Emil, Destiller-und Rektifiziertechnik, (Review, 467)
Kitchen, A. D., Walker Ltd., Radial Drilling and Tapping Machine, 942
Kitchen and Wade, Ltd., Dunlex Head Multi-smindle Drilling Machine, 768, 808
Krupp, Fried., Maschinenfabriken, 250-tonne Drawing Press with Compound Crank Drive, 569; 2000 b.h.p. Diesel Locomotive, 1070

L

Lacy-Hulbert and Co., Ltd., Output and Dewpoint Tests on Air Compressor Plant, 1016
Ladd & Little Incorporated, Bonding of Dissimilar Metals, 332
Laing, John, and Son, Ltd., Birmingham-Preston Motorway Progress, 768; Stafford By-pass, 36
Lakin, R. W., and S. S. Gill, Design of Reinforced Cylinder for Nuclear Reactor Pressure Vessel, 495
Lambretta Concessionaires, Ltd., "Balemaster", 71
Lancashire and Yorkshire Railways, Last of the Ironclads, 509
Landis Machine-Maiden, Ltd., Threading Machines, 59
Lansing Bagnall, Ltd., Electric Fork Truck, 39
Larkinson, R. B., Ingot Buggy and Shuttle Car Scheme, 231
Lauf-Bungert and Winnesberg, K. G., Hoist Crab, 83
Laycock Engineering, Ltd., Diaphragm Spring Clutch, 598
Laystall Cromard, Ltd., Hard Chrome Plating of Cylinder Liners, 604
Lea-Francis Cars, Ltd., "Lynx" 2/4 Seater Roadster, 672
LeBlond, R. K., Machine Tool Company, 20in Swing Centre Lathe, 819
Lee, Howl and Co., Ltd., Portable Pumping Set, 1062
Lee Wilson Engineering Company, Open Coil Processes of Annealing and Gas Alloying, 611, 650
Lees-Bradner Co., Vertical Heavy-duty Gear Hobbing Machine, 777
Leifeld and Co., Automatic Flow-forming and Spinning Lathe, 609
Leist, K., Gasturbinen-Arbeitsweise, Gestaltung und Andwendung, 315
Leo Computers, Ltd., Advanced Data Processing, 156
Leyland Motors Ltd., Heavy Vehicle Refinement, 435
Lightning Time Savers (B'ham) Ltd., Hand-setting Hose Clip, 78
Lincoln Electric Company, Ltd., 200A Welding Generator Set, 37
Line Equipment, Ltd., Extended Range of High-voltage Switch-fuse Units, 112
Linge, J. R., Thermal Cycling Rigs for Nuclear Reactor Fuel Elements, 1093
Lloyd, T. I., Modernisation: Road, Rail or Both, 1018; Passenger Transport Services Compared, 276; Thousands of Millions to be Saved?, 890; Transport and the Weather, 838
Lloyd's Register of Shipbuilding, Shipbuilding Returns, 765
Lloyd's Register of Shipping, Inspection of Pressure Plant for Land-based Nuclear Installations, 903; Merchant Shipbuilding Returns, 214; Rules for Nuclear Ships, 224; Ship Statistical Tables, 988; Ship's Steel, 275
Lockheed Hydraulic Brake Company, Automatic Clutch Control, 598
Loma Machine Manufacturing Company, Continuous Casting Plant for Australia, 956; Plutonium Rolling Mill Installation, 956
Loma Manufacturing Company, Automatic Bundling Machine for Billets and Wire Bars, 166
Londex, Ltd., Miniature Contactors, 77
London Midland Region of British Railways, Diesel-electric Pullman Trains, 29; First British 25kV Main Line Electrification, 461, 499; Longsight Electric Locomotive Depot, 112
London Transport, Central Line Diamond Jubilee, 281; Research Laboratory, 983; Resignalling on District Line, 563; Siding Allocation by Programme for District Line, 727
Lowe Machine Manufacturing Company, Low-ost Reversing Narrow Strip Rolling Mill, 652
Lucas, Joseph, Ltd., "Energy Transfer" Ignition System, 843
Lundell (Great Britain) Ltd., Forage Box, 73; Shredder, 73
Lyon, Arthur, and Co. (Engineers), Ltd., Tractor-driven Irrigation Pump, 972

M

M.T.E. Control Gear, Ltd., Control Gear Works Extension, 1021
McGarry, J. B., and L. J. Kastner, Mass Flow and the Mixing Process in Low-velocity Air-ejectors, 190
MacKenzie, K. J., W. O. A. Morton, G. F. J. Murray, and W. V. P. Ferguson, Experimental Boiler for Fuel Oil Combustion Research, 548
MacLaren, Sir Hamish, Electrical Engineering in the Royal Navy, 626
Machine Tool Advisory Council, Machine Tool Activity, 823; State of the Machine Tool Industry, 840
Machine Tool Industry Research Association, Formation, 487
Machine Tool Trades Association, Machine Tool Demand and Supply, 864; Machine Tools, 115, 286
Macinante, J. A., Seismic Mountings for Large Machine Tools, 880
Magco Ltd., Magnetic Drill Stands, 439; Vibrating Feeder, 283
Manchester University, Extra-mural (Extension) Department, Anglo-American Summer School on Industrial Archaeology, 941
Manchester Water Meter Company, Ltd., Water Meter Centenary, 973
Manufacturers of British Postal Equipment, Engineering for Postal Services, 42
Marconi Instruments, Ltd., Standard Signal Generator, 156; Transponder Test Equipment, 564; Electron Beam Parametric Amplifier Tube Unit, 456
Marconi's Wireless Telegraph Company, Ltd., Television Transmitters for Canada, 902; Underwater Television Camera, 1024
Marsh, John, Specialisation, 566
Marshall, J. W., and Co. Limited, Industrial Turntable in Paper Mill, 365
Marson, P. G., Industry and the New Rating Bill, 1111
Maschinenfabrik Deutschland, A.G., Wheel Lathe, 608
Maschinenfabrik Spandau, Internal and Facing Grinder, 649
Mason, E. N., and Sons, Ltd., Drawing Office Equipment, 74
Massey, B. and S., Ltd., 100-ton Wide Ram Press, 22
Massey-Ferguson, Ltd., Combine Harvester, 971; Mk. II Tractor, 971; Pallet Tippler, 71; Potato Harvesters, 71; Tractor Hitch, 474
Matchless Machines, Ltd., Precision Grinding Machines, 56
Matthews, J. J., High Energy Plasmas in Electrical Engineering, 306
Mattison Machine Works, Vertical Spindle Grinding Machine, 475
Mechanical Engineering Research Unit, Progress in South African Mechanical Engineering Research, 1029
Mees, C. E. K., Scientific Research is the Yeast of Business, 380
Meili, E., Traktoren -und Greiferräderfabrik. Multi-purpose Cross-country Vehicle, 816
Merck Sharp and Dohme, Ltd., Pharmaceutical Plant at Hoddesdon, 152
Mersey Docks and Harbour Board, Shell Refining Company, Ltd., Oil Terminal at Tranmere, 69
Mersey Tanker Services, Ltd., Tanker Cleaning Berth at Birkenhead, 901
Metalastik, Ltd., Toggle Link Rubber Suspension, 597
Metallurgical Engineering Committee, Institute of Metals, Lubricants for Cold-rolling Aluminium and its Alloys, 581; The Relative Merits of Extrusion, 583
Metropolitan Water Board, Second "New River" in London, 617; The Thames to Lee Valley Water Tunnel, 578
Michael and Partners Ltd., Mobile Screening and Stockpiling Conveyor, 400
Michigan Tool Company, Automatic Grinding Machine for Gear Teeth, 46
Microcell, Ltd., Electronic Digital Recorder, 625
Micromatic Hone Corporation, Automatic Transfer Installation of Four Honing machines, 911
Midgeley and Sutcliffe, Ltd., Heavy-duty Vertical Production Milling Machine, 14
Midland Electric Manufacturing Co. Ltd., Industrial Switchgear, 440
Millars' Machinery, Ltd., Asphalt and Coated Macadam Plant, 834; Wall Plastering Machine, 834
Millington, B. W., Temperature Measurements in a Doxford Cylinder Liner, 871
Minister of Labour, Tally Clerks' Strike, 949
Ministry of Education, Sandwich Courses, 442
Ministry of Labour, Employment, 115, 286, 644, 1027; Fire Fighting in Factories, 685; Joint Negotiation, 907; Washing Facilities in Factories, 214; Workshops for the Blind, 79
Ministry of Works, Construction, 988
Minnesota Mining and Manufacturing Company, Ltd., Aluminised Asbestos Fabric, 837
Mitchell Engineering Ltd., High-speed Coal Shipping, 402
Mitchell, W. D., Thousands of Millions to be Saved, 1052
Mitchell, W. R., Malpasset Dam, 503
Mobil Oil Company, Ltd., The Answer is Simple, 907; Rig for Testing Lubricants under Gamma Irradiation, 639
Möller, Hugo, "Fluid-Form" Process, 968
Monarch Machine Tool Company, "Dyna-shift" Centre Lathe, 820; Production Lathe with Multi-cut Cycling, 296
Moog Servocontrols, Pneumatic-hydraulic Machine Tool Control System, 954
Moore, I. G., Thousands of Millions to be Saved?, 800, 934
Moore and Wright (Sheffield), Ltd., Adjustable Square, 810
Morgan Crucible Company, Ltd., Aluminium Melting Furnace, 1026; "Morganite" Pantograph Carbons, 624
Morgan, D. G., Abnormal Loads by Road, 466
Morphy-Richards (Installations) Ltd., Ventilator for Water Closets, 730
Morris, B. O., Ltd., Drum Abrasive Band Sanders, 603
Morton, W. O. A., K. J. MacKenzie, G. F. J. Murray, and W. V. P. Ferguson, Experimental Boiler for Fuel Oil Combustion Research, 548
Mullard, Ltd., Frame Grid Valve Manufacture, 638; Semiconductor Factory Southampton, 756
Mullard Equipment, Ltd., Electronic Railway-signal Interlocking, 1022; 4.3 MeV Mobile Linear Accelerator for Weld Inspection, 986; Ultrasonic Cleaner of 6 Litres Capacity, 282
Muller, C. H. F., G.m.b.H., Automatic X-ray Spectrograph for the Determination of up to 24 Elements, 772
Muntz, Alan, and Co. Ltd., Lubricant Flow Indicators, 157
Munzinger, Friedrich, Atomkraft, 314
Murphy Radio, Ltd., Radar Navigational Aids, 511
Murray, G. F. J., W. V. P. Ferguson, K. J. MacKenzie, W. O. A. Morton, Experimental Boiler for Fuel Oil Combustion Research, 548
Myton, Ltd., Mechanised Car Park, 683

N

N.V. Rotterdam-Rijn Pijpleiding Maatschappij, Rotterdam-Rhine Pipeline in Operation, 122
Nalder Brothers and Thompson, Ltd., Earth Proving Supply Point, 625
Napier, D., and Son Ltd., De-icing Rotating Wings, 251
National Acme Company, Single-spindle Chucking Machine, 855
National Aeronautics and Space Administration, Space Vehicles, 382
National Bureau of Standards, Applications of Automatic Data Processing at the N.B.S., 330, 373; Compact Apparatus for Generating High Pressure, 294; Plasma and Astrophysics Research, 994
National Chemical Laboratory, Open Days, 725
National Coal Board Central Engineering Establishment, N.C.B. Equipment Developments, 113; Coal Prices, 512; Hawthorn Combined Mine, 826; Miners' Wages, 286; Mining Research Establishment, Investigations at, 1057; Mining Research Establishment, Research in Coal-mining, 1040
National Industrial Fuel Efficiency Service, Fuel Efficiency Progress Survey, 616
National Institute for Research in Dairying, Machine for "Cheddaring", 366
National Institute for Research in Nuclear Science, Radio-frequency Liner for Particle Accelerator, 235
National Radio and Television Exhibition, The Radio Show, 1960, 362
National Research Development Corporation, Binocular Rangefinder, 684
National Society for Clean Air, Progress Towards Clean Air, 615
National Trust, Poldhu Radio Site, 110
National Union of Manufacturers, Industrial Relations, 566
Neal, R. H., and Co., Ltd., 3/4 Cubic Yard Capacity Excavator, 798
Neumo, Ltd., Compatible Pumps, 684
Newage Machine Tools, Ltd., Small High-speed Milling Machine, 22

Newman Industries, Ltd., Motorised Hoist, 22
Newport News Shipbuilding and Dry Dock Company, Launch of U.S.S. "Enterprise", 1120
Nicholas, R., An Engineer's view of Planning City Centres, 151
Nicholl, G. W. R., Survival at Sea, 428
Norris Brothers, Ltd., "Bluebird" Project, 508
North East Coast Institution of Engineers and Shipbuilders, General Meeting, 666
North Eastern Gas Board, National Gas Supply for Whitby, 552
North of Scotland Hydro-Electric Board, Glen Nevis Hydro-electric Scheme, 641
Northfield Industrial Fabrications, Ltd., 7½ Cubic Yard Dumper, 948
Northrop Corporation, Laminarised Aircraft, 572
Northrop International, Solar-powered Interplanetary Probes, 484
Northwood, T. D., and A. T. Edwards, Experimental Studies of the Effects of Blasting on Structures, 538
Norton Company, Three-station Crankshaft Transfer Line, 857
Norton, Sir James, Farmer, and Co. Ltd., Tube Saw, 511
Nothelfer, A., and Sohne, and Cold Forging, Ltd., Complete Cold Forging Installation, 649
Nuclear Energy Committee, Institute of Metals, Magnesium Alloys for Fuel Element Components, 583
Nuclear Equipment, Ltd., Nuclear Remote Handling Equipment, 1010
Nuffield Foundation, Industrial Health, 265
Nuffield Organisation, Tractor, 73
Numec Ltd., Portable Belt Conveyor, 283

O

O.E.E.C. Coal Committee, O.E.E.C. Reviews Coal Situation, 122; "Dragon" High-temperature Reactor, 302, 338; Proposed International Conference on Road Research, 158
Office National d'Etudes et de Recherches Aeronautiques, Magnetic Suspension of Wind Tunnel Models, 607
Ogorkiewicz, R. M., American Military Vehicles, 1054
Otis Elevator Company, Ltd., Opening of the Trav-o-lators at Bank Station, 563
Oxylor, Oxygen Pipe Network, 162
Ozalid Company, Ltd., Microfilm Copying Machine, 985

P

PIAB, Combination Compasses, 610
P. & O.-Orient Lines, "Oriana", 962, 1003
Panellit Ltd., Miniature Logic Units, 403
Pantak, Ltd., Lightweight X-ray Unit, 765
Park Gate Iron and Steel Company, Ltd., New Steel Works, 770
Parker, Frederick, Ltd., Variable Speed Aggregate Blender, 946
Parker, G. C. C., T. Furman and K. W. Chandler, Edge Cracking of a Steel Band Conveyor, 1099
Parking Corporation of America, Automatic Car Park Gate, 1023
Pass, E., and Co. Ltd., Hydraulic Thrust Boring Machine, 321
Payne Products International, Ltd., Surface Finish Measurement, 941
Pearson Panke, Ltd., Transfer Press of 160 Tons Capacity, 16
Pearson, R. F., Civil and Public Health Engineering, 696
Peckett and Sons Ltd., Parallel Plug Rotary Valves, 402
Perkins Engines, Ltd., Direct Injection Engine for Vehicle Use, 530; "Six 354" Direct Injection Diesel Engine, 836
Perkins Gas Turbines, Ltd., Large Lightweight Gas Turbine, 950
Permali, Ltd., Wood Laminate Supports in a V.L.F. Radio Transmitter, 681
Permutit Company, Ltd., Small Portable Water Purifier, 210
Petermann, H., Konstruktionen und Bauelemente von Stromungsmaschinen, 315
Petroleum Information Bureau, Oil Consumption in Great Britain, 440, 988
Philip and Son, Ltd., High-speed Launch "Landward", 41; Mersey Passenger Ferry "Woodchurch", 41
Physical Society Exhibition, 1961, 845
Pidd, G. S., The Tuned Damper and its Vector Diagram, 531
Pirelli, Ltd., Apprenticeship Schemes, 115
Plessey Company Ltd., Flight Deck Communications System, 473; Miniature Electrolytic Capacitors, 726; Rotary Position Selector Unit, 363
Portable Welders, Ltd., Spot Welding Gun, 811
Posalux Frautschi and Monney, Semi-automatic Co-ordinate Drilling and Boring Machine, 608
Posse, A. V., V. E. Touretski and E. S. Groiss, 800kV D.C. Transmission System Stalingrad-Donbass, 66
Post Office Engineering Union, Telephone Development Proposal, 685
Poultney, E. C., Some Notable Locomotives of 1910, 266
Powell Duffryn Carbon Products, Limited, Graphite Cartridge Condensers, 365
Precision Gear Machines and Tools, Ltd., Recirculating Ball Nut and Screw Units, 1059
Proctor, A. N., Rules and Regulations for Structural Steelwork, 64; Structural Steelwork and British Standards, 240
Production Engineering Research Association, Drilling Cast Iron, 625
Prus-Chacinski, T. M., New Water Policy Foreshadowed, 1108
Pugsley, Sir Alfred, Statics and the Engineer, 424
Pulsometer Engineering Company, Ltd., Compact Boiler Feed Turbopump, 1026
Pye Ltd., Anti-tank Weapon, 422; Direction Finder for Small Craft, 565; Local Broadcasting and Radio Links, 362; Plan for Local Broadcasting, 695
Pyrene Company Ltd., Surface Treatments for Aluminium, 364

Q

Qualcast Ltd., Mechanised Foundry, 640

R

Radiation Dynamics Incorporated, Particle Accelerator, High-power, 692
Radio Heaters, Ltd., Vapour-cooled Valves for Industrial Heaters, 946
Radio Research Board, Radio Research Report, 562
Radio Society of Great Britain, Radio Hobbies Exhibition, 441
Railway Conversion League, Thousands of Millions to be Saved, 744
Rank-Xerox, Ltd., Rapid Development of X-ray Pictures, 727
Ransomes Sims and Jeffries, Ltd., Gravity Flow Grain Dryer, 971
Rapid Magnetic Ltd., Magnetic Mineral Separator, 364
Rawson, Sir Stanley, Machine Tool Development and the National Economy, 23
Read, J. C., Germanium and Silicon Power Rectifiers, 533
Reaktor A.G., Research Reactor "Diorit" Critical, 409
Redifon, Ltd., Analogue-Digital Computing System, 77; Data Monitoring and Display, 323; Independent Sideband Transmission, 110; Tape Transport Mechanism, 728; Transistorised Single-sideband Radio, 905
Reliance Electric and Engineering Company, Six-face Turret Head Drilling Machine with Numerical Control System, 954
Research Association, Machine Tool Industry, 487
Research and Control Instruments, Ltd., Mobile CO2 Welding Equipment, 111; H.F. Induction Heaters, 473
Revel Engineering Company, Ltd., Drill Jig for Cylindrical Work, 810
Reynolds, C. E., Examples of the Design of Reinforced Concrete Buildings, 503
Reyrolle, A., and Co. Ltd., Single-phase Air-blast Circuit-breaker, 560
Rhoades Incorporated, Hover Scooter, 842
Rhodes, Gill and Co. Ltd., Hydraulic Presses, 212
Richardsons Westgarth & Co. Ltd., Expansion Joint for High-pressure Ducting, 400
Ridley, G. K., Digital Computer Applied to the Design of Salient-pole Synchronous Machines, 705
Road Research Laboratory, Value of Road Improvements, 337
Roberts, S., Paddle Steamer Preservation, 503
Robinson, E. S. and A., Ltd., Metallised Materials, 251
Robinson, Thomas, and Son, Ltd., High-speed Bag Packer, 643
Rocard, Y., General Dynamics of Vibrations, 974
Rockwell Machine Tool Company, Ltd., Automatic Internal Grinder, 17; Production Boring Machine, 16; Two-part Single Action British Clearing Press, 17
Rolls-Royce Ltd., 51in by 6in Diesel Engines, 837; Bypass Engines, 454
Rootes Motors, Ltd., Industry in Scotland, 605
Rose, William, Ltd., Sealing Tape for Threaded Pipe Joints, 982
Rotork Engineering Company, Ltd., Electric Valve Actuators, 76
Rotterdamse Polvolefinen Maatschappij, N.V., Projected Plastics Factory at Rotterdam, 610
Royal Aeronautical Society, Supersonic Transport Aircraft, 1006
Royal Aircraft Establishment, Pilot's Information Display, 1062
Royal Dutch/Shell Group, Dutch Rubber Plant, 517
Royal Smithfield Show and Agricultural Machinery Exhibition, Agricultural Machinery Show at Earls Court, 929, 971
Royal Society, Britain's Nuclear Power Plant Prospects, 129; Tercentenary Exhibition, 208
Royce Electric Furnaces Ltd., Slug Heating Furnaces, 440
Royles, Ltd., A Small Calorifier, 564
Rubery Owen and Co., Ltd., Shielded Arc Welding and Flame Cutting Equipments, 847
Rural Industries Bureau, Helping Rural Industries, 336; Rural Industries Exports, 367
Ruston and Hornsby, Ltd., Diesel-hydraulic Industrial Shunter, 211
Ryder, Thomas, and Son, Ltd., Vertical Eight-spindle Chucking Automatic, 59
Ryley, Denis J., An Indirect Method of Measuring Static Temperature in Supersaturated Expanding Steam, 343

S

Saadawi, Mahmoud Hassaan, Investigation of Cut-off and Throttle Governing of Petrol Engines, 1083
Safety in Mines Research Establishment, Gas Explosions in Mines, 453
Salford Electrical Instruments, Ltd., Semi-flush Panel Meters, 78; Thermoelectric Cooling Unit, 809
Sandéns Mekaniska Verkstad, AB, Dual-purpose Milling Machine, 1033
Sandover, J. A., Fluid Mechanics Laboratory Equipment, 227
Sandvik Steelworks Company, Ltd., Factory for the Production of Rock Drilling Equipment, 1033
Saunders, Owen A., Scientist's Contribution to Mechanical Engineering, 760
Saunderson and Costin, Ltd., Threading Attachment, 62
Savage & Parsons Limited, Direct-writing Oscillograph Recorder, 321
Scammell Lorries Ltd., Heavy Vehicle Innovations, 468
Schuler, L., A.G. Die Forging and Upsetting Machine, 569
Scientific Instrument Manufacturers' Association, Contacting the Unconscious, 864
Scottish Council (Development and Industry), National Resources in Scotland, 438
Scrivener, Arthur, Ltd., Centreless Grinding Machines, 55
Second International Reinforced Plastics Conference, Reinforced Plastics, 960
Selson Machine Tool Company, Ltd., Horizontal Boring Machine, 14; Rotary Table Surface Grinder, 14; Two-spindle Horizontal and Vertical Milling Machine, 14
Servomex Controls Ltd., Improved Motor Speed Controller, 283
Severn, G. M., and P. W. Harrison, Instrument for Measuring Very Small Bores, 467
Sharp, Jones and Co., Limited, Glass-fibre-reinforced Concrete Pipes, 361
Sheffield Corporation, Multi-form Grinding Machine, 858
Sheldon, C., Magnesium and its Alloys, 934
Shell-BP Petroleum Development Company, Oil Search in Nigeria, 563
Shell-Mex and B.P. Ltd., Recording and Invoice System, 674
Shell Central Laboratory, Combustion Laboratory at Egham, 658
Shell Refining Company, Ltd., Oil Terminal at Tranmere, 69, 160
Ship and Boat Builders' National Federation, International Boat Show, 1059
Shipbuilding Conference, Shipbuilding Statistics, 252, 769
Short Brothers and Harland Ltd., Light Aircraft for Freighting, 399; Short SB-5, Full Scale Flight Research, 724
Siba Electric, Ltd., Geared Starter Motor, 844
Sideriades, L., Methodes Topologiques Appliquees a L'Electronique, 352
Siemens-Electrogeräte A.G., Safety Shower Handpiece, 517
Siemens and Halske Aktiengesellschaft, Contactless Control Elements Arranged as Building Units for Training and Study, 733; Electronic Instrument for the Automatic Evaluation of Recordings, 772; Self-supporting Plastic Cylinder for Television Aerial, 952; Seven-tube Cathode-ray Oscillograph with Automatic Development of the Recording Paper, 773
Siemens-Schuckerwerke A.G., Contact Resistance of Metal Sheet, 952
Silentbloc, Ltd., "Flexsil" Coupling, 720
Simm, G. E., Engineering Ltd., Bearing Extractor, 320
Simms Motor Units, Ltd., Manifold Injection System, 721
Simon-Carves Atomic Energy Group, Progress on Hunterston Nuclear Power Station, 555
Simon Handling Engineers Ltd., Industrial Heating Jackets, 441; Volumetric Feeder for Dry Materials, 726
Singh, B. R., Sensitivity of Slow Shifting under Stick-slip Conditions, 187
Skoda Works, Model of Raking Machine for Discharging 120 tons of Sugar Beet per Hour, 689
Slough Industrial Health Service, Slough Occupational Hygiene Service, 473
Smith, A. O., Corporation, Powerful Linear Accelerator for Radiographic Inspection, 1072
Smith, Earl C., The Schwab Memorial Lecture, 570
Smith's Dock Company, Ltd., Brochure, 511
Smith's Motor Accessories, Ltd., Thermostatically Controlled Coupling, 599
Soag Machine Tools, Ltd., High Speed Production Lathe, 20
Società Azioni Ansaldo, Liner "Leonardo Da Vinci", 329; Laying of Keels of Italian Liners, 569
Société des Acieries de Pompey, Fuel Oil Iniection in Blast-furnaces, 909
Societe Anonyme d'Horlogerie LIP, Electric Comparator, 648
Societe des Chantiers Reunis Loire-Normandie, Passenger and Car Ferry "Egnatia", 610
Society of British Aircraft Constructors, 1960, Exhibition, 418, 454; More About Farnborough, 451
Society of Chemical Industry, Corrosion Problems in The Petroleum Industry, 391; Oxidation of Steel by Carbon Dioxide, 27; Protection of Gas Plant and Equipment from Corrosion, 670
Society of Motor Manufacturers and Traders, Commercial Motor Show, 526; Motor Show, 1960, 719; Motor Vehicle Exports, 76
Socony Mobile Oil Company, Volatile Detonation Inhibitor, 46
Soiltest Inc., Quality Control of Concrete, 376
Solartron Electronic Group, Ltd., Electronic Reading Automaton, 970
Solartron Laboratory Instruments, Ltd., Low-distortion Transistor Oscillator, 939; Resistor Test Set, 849; Single and Double Pulse Generator, 1065
South African Railways, Increase in Crane Capacity for South African Harbours, 814
South of Scotland Electricity Board, Kincardine Power Station, 618
Southern California Edison Company, 360MW(e) Nuclear Power Station in California, 126
Southern Instruments, Ltd., Mains-failure Generator Control Panel, 943
Southern Region of British Railways, Automatic Warning System, 902; Widening for Kent Coast Electrification, 63
Spadeadam Rocket Establishment, Rocket Engine Testing, 431
Specialties Incorporated, Turret Lathe Equipped with Numerical Control System, 916
Speed Tools, Ltd., Ratchet Piston Clamp, 948
Sperry Gyroscope Company, Point-to-point Positioning Control System, 915; Ship Loading Calculator, 114
Spicers, Ltd., Self-adhesive Packaging Material, 630; Stationery Factory at Sawston, 1059
Spooner, W. H., Nuclear Power Prospects in Australia, 272
Spratt, Phillip H., The Birth of the Steamboat, 466
Standard Pressed Steel Company, Twelve-point Headed Bolt, 457
Standard Telecommunication Laboratories, Ltd., Pulse Code Modulation Telephony, 1115
Standard Telephones and Cables Ltd., Automatic-direction Finding Triangulation System, 456; Communications and Navigational Aids, 455; First Broadband Microwave Link in New Zealand, 983; Microwave Frequency Checking Equipment, 1114; New Instrument Landing System at London Airport, 209; Remote Supervisory Control System for Eastern Region Feeder Stations, 591
Stanhay (Ashford), Ltd., Beet Harvester, 971
Star Aluminium Company, Ltd., Jubilee, 1028
Startrite Machine Tool Company, Ltd., Bandsawing Machine Fitted with a Hydraulic Feed Table, 16
Stedall Machine Tool Company, Ltd., Jig Borer with Optical Measuring System, 57
Steel Company of Wales, Margam "B" Power Station, 101
Steels Engineering Products, Ltd., Wheeled Carriages for Crane Outriggers, 847
Stenners of Tiverton, Ltd., West Country Foundry, 214
Stephenson, Robert, and Hawthorns Ltd., Diesel Locomotives for East Africa, 365
Stewarts and Lloyds, Ltd., "Nuclear Clean" Workshop, 799
Stolzer, Karl, Maschinenfabrik, Automatic Sawing Machine, 569
Strachan and Henshaw, Ltd., Charge-discharge Machines at Bradwell Nuclear Power Station, 804
Sulzer Brothers, Ltd., Large Bore Marine Diesel Engine, 1077
Superwelds (Lewisham) Ltd., Steel Chimneys, 322
Sutcliffe, Richard, Ltd., High Angle Belt Conveyor, 474; Hydraulic Drive for Mine Conveyors, 944; Water Infusion Equipment, 731
Svenska Aeroplan Aktiebolaget, SAAB 96, 719
Swaminathan, V. S., Pumpability of Waxy Crude Oils, 280; United Kingdom Oil Industry, 866
Swiss Locomotive and Machine Works (SLM), Axial Multiple Plunger Pump, 409
Switchgear and Cowans, Ltd., Oil-insulated 25kV Switchboard for Feeder Stations, 624
Sykes, J. H. M., The Rance Tidal Power Project, 689
Sykes Machine Tool Company, Ltd., Automatic Multi-unit Machine, 12; Facing Copy Lathe, 12; Model 44LR Lathe, 12

T

T.A.L. Numatics, Ltd., Control for Pneumatic Rams, 155
Tarmac Civil Engineering, Ltd., Tryweryn Reservoir, 111
Taylor, E., and Sons (Manchester) Ltd., Mobile Mine Tower, 403
Taylor Electrical Instruments, Ltd., Valve Tester, 564
Technograph Electronic Products, Ltd., Tape Cable, 762
Tees Valley and Cleveland Water Board, Selset Reservoir, 642
Texas Instruments, Ltd., Photovoltaic Light Sensors, 850; Semiconductor Devices, 401; Tunnel Diodes in Production, 903
Thomas Industrial Automation Ltd., Continuous Level Indicator, 247; Level Indication and Control, 1023
Thompson, A. G., High Productivity in Heavy Engineering, 428
Thompson Brothers (Bilston) Ltd., Autotanker, 526
Thompson Grinder Co., High Production Surface Grinder, 777
Thomson, Sir George, Two Aspects of Science, 394
Thornycroft, John I., and Co. Ltd., Fire-fighting Tug "Keverne", 41; Launch of H.M.S. "Ghurka", 208
Thyssen Shaft Sinking Company, Ltd., Excavating the Cut-off Trench for a Reservoir Embankment, 668
Touretski, V. E., E. S. Groiss, and A. V. Posse, 800kV D.C. Transmission System Stalingrad-Donbass, 66
Tourtemagne, Prestressed Arch Dam, 4
Town and Country Planning Association, Planning and the Motor Vehicles, 724
Trades Union Congress, Industrial Relations and the T.U.C., 367; Ninety-second T.U.C., 404; Presidential Address, 442; Who is to Blame?, 336
Traffic Engineering Study Group, Traffic Survey for Dartford-Purfleet Tunnel, 849

Tripp, G. W., Paddle Steamer "Freshwater", 104; S.S. "Caesarea", New Vessel for Channel Islands Services, 975; Tug for Newhaven, M.V. "Meeching", 275; Tug Tender for Southampton, M.V. "Gatcombe", 243
Triulzi of Milan, Injection Moulding Machine, 816
Trojan, Ltd., Piezoelectric Ignition Switch, 973
Tuplin, W. A., British Steam Locomotives since 1900, 395, 890; Structural Steelwork and British Standards, 104, 240
Turin Polytechnic, Soil-vehicle Systems, 427
Turner, T. Henry, Aluminium Alloys in Railway Rolling Stock, 26; Corrosiveness of Indoor Atmospheres, Iron and Steel Institute, Atmospheric Corrosion Sub-Committee, 935; Fatal Boiler Explosion, 758; First International Congress on Metallic Corrosion, London, 1961, 935; Non-ferrous Metallurgists in the West of England, 580; "The Metallurgy of Beryllium" International Conference, 1961, Institute of Metals, Nuclear Energy Committee, 935; Teaching of Metallurgy to Engineers, 1110
Tyne Board Company, Ltd., Particle Board Factory, 106
Tyner, Mack, Process Engineering Calculations: Material and Energy Balances, 241

U

U.S. Atomic Energy Commission National Reactor Testing Station, Special Power Excursion, Reactor Test in Idaho, 163
U.S.A.F. Ballistic Missile Division, "Discoverer" Satellite Programme, 383
Union Carbide Europa, S.A., Jet Flame Drilling and Working of Stone, 162
Union Castle Mail Steamship Company Limited, Liner "Windsor Castle", 354
United Aircraft Corporation, Hamilton Standard Division, Welding and Machining by Electron-beam Bombardment, 738
United Kingdom Atomic Energy Authority, Broadening the Fusion Research Programme, 577; Electronic Extensometer, 731; Nuclear Power Progress in Britain, 171, 144; Radiation Pyrometer, 810; Wantage Research Laboratory, Leak Detection with Radio-isotopes, 438; "ZEBRA": Zero Energy Breeder Reactor Assembly, 74
United Steel Companies Ltd., Roll Pass Design, 466; Steel Firm's New Headquarters, 252
Universal Shipyards (Solent) Ltd., Aluminium Alloy Survey and Patrol Launch, 41
Urquhart's (1926), Ltd., Burning of Heavy Fuel Oil, 1025
Utah Australia, Ltd., King Street Bridge, Melbourne, 514
Utkal Machinery Private Ltd., Formation of, 162

V

Valdarno, S.A., Universal Punching and Shearing Machine, 993
Vauxhall Motors Ltd., Further Truck and Tyre Evolution, 437
Van Norman Machine Company, Miniature Ball Bearing Race Grinding Machine, 911
Vickers-Armstrongs Ltd., Launch of S.S. "Serenia", 684; T.S.S. "Oriana", 920
Villers Engineering Company, Ltd., 269 c.c. Air-cooled, Four-stroke, Diesel Engine, 799; Small High-speed Diesel Engine, 641
Vineall, G. J., Molybdenum Disulphide Concentrates, 240
Vitafoam, Ltd., Seating Platform in High Tensile Rubber, 597
Vivian, A. C., Mechanical Properties of Materials, 593
Vosper, D. F. C., Roundabouts and Traffic Signals, 1052
Vulcan Foundry, Ltd., Locomotive Building, 601

W

Wagner and Co., Heavy Trepanning and Reboring Lathe, 609
Waldram, J. M., Road Surfaces, Seeing and Driving, 594, 632
Wallis, G. B., Analogy Between the Bubbling of Air into Water and Nucleate Boiling at Saturation Temperature, 8
Walker, B. A., Distribution of Shear Stress in a Box Beam, 193
Walker, G., Note on Indicating the Free Piston Engine, 883
Walkerdine, R. H., Guide to the Coalfields, 1960, 315
Wanner, W., Grundlagen Hydrostatischer Antriebe, 241
Ward, Thos. W. Ltd., 4 Cubic Yard Truck Mixer, 799; 22 tons Capacity Dump Truck, 799
Warner and Swasey Company, Automatic Turret Lathe, 818; Precision Chucking Turret Lathe, 818; "Probomat" System of Numerical Tape Control, 819
Warren Spring Laboratory, Report, 74
Water Pollution Research Laboratory, Industrial Value of D.S.I.R. Research, 892, 922; Water Pollution Research in 1959, 36
Watkinson, A. I., Thousands of Millions of Pounds to be Saved?, 934
Weaver Manufacturing and Engineering Company, Ltd., Brake Tester, 599
Webster and Bennett, Ltd., Boring and Turning Mill, 1060
Welwyn Electric, Ltd., High-voltage Resistors, 767
Wendel, K., Handbook der Werften, 1958, 467
Werner, Luft, and C. A. Escoffery, Silicon Cells and Solar Energy, 316
Westinghouse Brake and Signal Company, Ltd., Silicon Rectifiers, 561
Westinghouse Electric Corporation, 6000kW Silicon Rectifier for Aluminium Smelting, 571; Fuel Cell Generators, 84; New Methods of Electric Power Generation, 84, 123; Thermoelectric Generation, 85; Thermionic Generation, 86
Weston, G., Structural Steelwork, 25; Structural Steelwork and British Standards, 193
Whaley, David, Road Accidents, 890
Whitlock Bros., Ltd., Hydraulic Excavator and Shovel, 508.
Wickman Ltd., Face Milling Cutters, 285; Jig Borer, 60; Turret Design Drilling Machine, 60
Wild, M. B., and Co. Ltd., Potato Digger, Swing-sieve, 71
Williams, R. D., East London Harbour, 104
Williams, T. R. G., and D. H. Hughes, Problems Involved in the Development of Programmed Fatigue Testing, 703
Wilkins and Mitchell, Ltd., Double Action 750-ton Press, 58
Winder, W. H. D., Withholding of Certificates by the Engineer: The Question of Arbitration, 465
Winget, Ltd., Automatic Concrete Batching and Mixing Plant, 835
Winston Electronics Ltd., Automatic Beryllium Monitor, 321
Wood, L. J. Carden, Control of Water Resources, 25
Wood, R. H., and J. F. Eden, Stiffness of a Crane Jib, 181
Woodhouse and Mitchell, Ltd., Toolroom Lathe, 62
Workington Iron and Steelworks, Workington Sinter Plant, 1020
Wylie, Matthew, and Co., Ltd., Blow-moulding Machine, 1033

Y

Yorkshire Engineering and Welding Company, Ltd., Articulated Tanker, 528

Z

Zeiss, Carl, Immersion Refractometer, 480; Micro Flash Unit, 445; Micro Projection Apparatus, 480
Zuse, K. G., "Z70" Centralised Production and Accounting System, 774

SUBJECTS—CLASSIFIED

A

A.C. Drives for Two Bascule Bridges, Crompton Parkinson, Ltd., 945
Abnormal Loads by Road, D. G. Morgan, (Letter, 466)
Abrasive Band Sanders, Drum, B. O. Morris, Ltd., 603
Academic Awards, 807
Accelerators, Linear, 4.3 MeV Mobile, for Weld Inspection, Mullard Equipment, Ltd., 986
Linear, Powerful, for Radiographic Inspection, A. O. Smith Corporation, 1072
for the N.B.S. 100 MeV Linear Electron, High Voltage Engineering Corporation, 519
Particle, High-Power, Radiation Dynamics Incorporated, 692
Radio-Frequency Liner for Particle, National Institute for Research in Nuclear Science, 235
Accidents, Electrical, (Leading Article, 656)
Engineers and Industrial, A. A. Beckingsale, 459
Railway, 659
Road, "Callipides", (Letter, 631)
Road, — B.S.S. 812 — Methods of Testing Mineral Aggregates, H. N. Jenner, (Letter, 800)
and Visibility, Recent Studies in, J. M. Waldram, 632
Accounting, Mechanised, Telephone, International Computers and Tabulators, Ltd., 110
and Production System Centralised "Z70", Zuse K.G., 774
Acetylene and Carbide Plant in Northern Ireland, British Oxygen Engineering, Ltd., 40
Achema Congress, 1961, and European Congress of Chemical Engineering, 83
Actuator, Fluid Pressure, Automatically Adjusted, (Patent, 168)
Adcock Direction Finder, (Patent, 128)
Adiabatic Saturation, Standard Humidity-Measuring Instrument, Based on the Principle of, 1030
Adjustable Square, Moore and Wright (Sheffield), Ltd., 810
Advanced Business Studies, 812
Gas-Cooled Reactor at Windscale, 160
Aerial, Television, Self-Supporting Plastic Cylinder for, Siemens and Halske Aktiengesellschaft, 952
Aeroelastic Unloading, Suppression of, 405

AERONAUTICS

B.O.A.C. and Supersonics, British Overseas Airways Corporation, (Leading Article, 263)
S.B.A.C. Exhibition, 1960, 418, 454
Aeronautical Communication, Caribbean, 75
Air Surveys in the Indus Catchment, Hunting Surveys, Ltd., 508
Aircraft, (Patents, 167, 573)
Anti-Collision Radio Equipment for Aircraft, (Patent, 449)
Astronautical Propulsion and Power Conversion Systems, Goodrich-High Voltage Astronautics Incorporated, 257
Australian Aeronautical Researches, Aeronautical Research Laboratories, 1056
Angle of Approach Indicators, (Patent, 741); J. C. Adams, (Letter, 890)
Another "First" in Space for Russia, (Leading Article, 335)
Annular Jet Ground Effect Machine, Britten-Norman, Ltd., 34
Construction et Etalonage d'une Soufflerie à Gaz Très Rarefié, F. Marchel Devienne, Georges M. Forestier and Andre F. Roustan, (Review, 393)
De-Icing Rotating Wings, D. Napier and Sons, Ltd., 251
Design for Flight: The Kurt Tank Story, Heinz Conradis, (Review, 65)
Effect of Structural Damping on Binary Flutter, E. G. Broadbent and Margaret Williams, (Report, 1058)
"Electra" Accidents, 45
"Electrics" and Electronics in Aircraft, Lord Caldecote, 897
Eleventh International Astronautical Congress, Svenska Interplanetariska Sallskapet, 382
European Research in Space, 1033
Explorations de la Couche Limite, Jean-Francois Dorand, (Review, 429)
Far Eastern Aviation Show, 1064
Flat-Rising Jet V.T.O.L. Hawker P. 1127, 943
Flight Deck Communications System, The Plessey Company Ltd., 473
Full Scale Flight Research, Short SB-5, 724
Grants for Space Research, Department of Scientific and Industrial Research, 279
High Speed Wind Tunnels, English Electric Aviation, Ltd., 676
Internal Damping Due to Structural Joints and Techniques for General Damping Measurements, D. J. Mead, (Report, 8)
Jane's All the World's Aircraft, 1960-61, (Review, 1108)
Joint Meetings on Applications of Electricity in Aircraft, Institution of Electrical Engineers and Royal Aeronautical Society, 765
Laminarised Aircraft, Northrop Corporation, 572
Last of the Few, Bristol "Britannia", (Leading Article, 785); C. Abell, (Letter, 1018)
Light Aircraft for Freighting, Short Brothers and Harland, Ltd., 399
Magnetic Suspension of Wind Tunnel Models, Office National d'Etudes et de Recherches Aeronautiques, 607
Measurements in the Vortex Flow Generated by a Sharp Leading Edge having 65 Degrees Sweep, N. C. Lambourne and D. W. Bryer, (Report, 806)
Mobile Staging, Bristol Aircraft Ltd., 284
More About Farnborough, Society of British Aircraft Constructors, (Leading Article, 451)
New Aero Engines, Bristol Siddeley, 278
New Instrument Landing System at London Airport, Standard Telephones and Cables Ltd., 209
Pilot's Information Display, Royal Aircraft Establishment, 1062
Principles of Guided Missile Designs—Systems Preliminary Design, (Review, 669)
"Polaris" Missile, (Leading Article, 488)
Potable Water Supply in Sealed Vehicles, General Electric Space Sciences Laboratory, 46
Problèmes de la Surface Portante Annulaire Traités par la Méthode des Analogies Rhéoélectriques, (Report, 8)
Pros and Cons of the "Polaris" Missile, (Leading Article, 961)
Radio Convention on Space Research, British Institution of Radio Engineers, 400
Reflections in the Window, (Leading Article, 415)
Rocket Engine Testing, Spadeadam Rocket Establishment, 431
Propellant Handbook, B. Kit and D. S. Evered, (Review, 392)
Rockets and Space Flight up to 1960, John E. Allen, 92, 132
Rotating Flap as a High-Lift Device, (Report, 8)
Satellite System for World-Wide Communications, Bell System, 518
Signals via "Echo" Satellite, 437
Singularitätentheorie der Flügelgitter, Ludwig Meyer, (Review, 105)
Solar-Powered Interplanetary Probes, Northrop International, 484
Some Technical Aspects of Satellite Communication, "Echo", 469
Space Flight Vol. 1, Environment and Celestial Mechanics, Krafft Ehricke, (Review, 352)
Technology Symposium, 1028
Supersonic Transport Aircraft, Royal Aeronautical Society, 1006
Suppression of Aeroelastic Unloading, 405
Sur Quelques Problèmes Posés par l'Experimentation en Soufflerie Aerodynamique, A. Martinot-Lagarde, (Review, 801)
Surface Effects on Spacecraft Materials, First Symposium, Francis J. Clauss, (Review, 547)
Symposium on Communications Satellites, British Interplanetary Society, 1067
Tandem-Winged Aircraft, (Patent, 450)
Towed Target Systems, Del Mar Engineering Laboratories, 903
Trade by Air, 907
Upper Atmosphere Achievements, (Leading Article, 300)
X-Ray Spectrometer for Satellite, Guided Weapons Laboratory of Bristol Aircraft, Ltd., 849

AFRICAN ENGINEERING NEWS

Abnormal Load Carried on South African Road, 814
Diesel Locomotives for East Africa, Robert Stephenson and Hawthorns, Ltd., 365
Electric Locomotives for South Africa, Associated Electrical Industries Limited, 358
Increase in Crane Capacity for South African Harbours, South African Railways, 814
New Milnerton Lighthouse in Table Bay, 814
Progress in South African Mechanical Engineering research, Mechanical Engineering Research Unit, 1029
South African Research into Harbours and Coastlines, 254

Aggregate Blender, Variable Speed, Frederick Parker, Ltd., 946
Aggregates, Mineral, Methods of Testing,—B.S.S. 812—Road Accidents, H. N. Jenner, (Letter, 800)

AGRICULTURAL MACHINERY

Agricultural Machinery Exports, Agricultural Engineers Association, 644
Machinery Show at Earls Court, Royal Smithfield Show and Agricultural Machinery Exhibition, 929, 971
Statistics Computer, Department of Agriculture and Fisheries, 730
Training Centre, Agricultural Engineers Association, 566
Crawler Tractor, 60 h.p., International Harvester Company of Great Britain, Ltd., 155
Displaying Farm Machinery, (Leading Article, 89)
Helping Rural Industries, Rural Industries Bureau, (Leading Article, 336)
Machine for "Cheddaring", National Institute for Research in Dairying, 366
Machinery at the Royal Show, 71
Tractor Hitch, Massey-Ferguson, Ltd., 474

Air Bleed Turbines, Auto Diesels Ltd., 409
Break Circuit Breakers, Contact Systems for, (Patent, 378)
Break Switches and Fuses, Heavy Duty Composite Units of, 109
Blast Circuit-Breaker, (Patents, 127, 693)
Blast Circuit Breaker for Roof Mounting on Locomotives, Associated Electrical Industries, Ltd., 592
Blast Circuit Breaker for 380kV, 689
Blast Circuit Breaker, Single Phase, A. Reyrolle and Co. Ltd., 560
Clean, Progress Towards, National Society for Clean Air, (Leading Article, 615)
Compressor Plant, Output and Dewpoint Tests on, Lacy-Hulbert and Co., Ltd., 1016
Compressor, Screw Design, Sir George Godfrey and Partners (Industrial), Ltd., 940
Conditioning, Refrigeration and Heating Equipment, Chrysler International, S.A., 245
Content of Oil, New Instruments for Measuring the, A. T. J. Hayward, (Report, 1058)
Cooled, Four-Stroke Diesel Engine, 269 c.c., Villiers Engineering Company, Ltd., 799
Cooling, for Food Packet Sealing, Kellogg Company, 282
Ejectors, Mass Flow and the Mixing Process in Low-Velocity, L. J. Kastner and J. B. McGarry, 190
Motor Driven Winch, Globe Pneumatic Engineering Company Limited, 320
Powered Hydraulic Servo, Clayton Dewandre Company, Ltd., 209
Surveys in the Indus Catchment, Hunting Surveys, Ltd., 508
Suspension, Bosch, on Six-Cylinder 2.3 Litre Borgward, 673
Aircraft—See also under Aeronautics
Aircraft, Joint Meetings on Applications of Electricity in, Institution of Electrical Engineers and Royal Aeronautical Society, 765
Alarm, Fire, Self-Contained, Fire Cry-er, Ltd., 846
Alignment Calibration, Suspension, Optical, V. L. Churchill, 600
Alloying, Gas, and Annealing, Open Coil Processes of, Lee Wilson Engineering Company, 611, 650
Alloys, Engineering Properties of, 582
Alternating Current Electric Traction Equipments, (Patent, 261)
Current Frequency Converters, (Patent, 485)
Gradient Synchrotron at Brookhaven National Laboratory, 446, 481
Source, Direct Current Supply from, (Patent, 741)
Alumina, Activated, and Silica Gel for Use as Desiccant for Packages, (B.S.I., 88)
Aluminised Asbestos Fabric, Minnesota Mining and Manufacturing Company, Ltd., 837
Aluminium Alloy Survey and Patrol Launch, Universal Shipyards (Solent) Ltd., 41
and its Alloys, Lubricants for Cold-Rolling, Metallurgical Engineering Committee, Institute of Metals, 581
Alloys in Railway Rolling Stock, T. Henry Turner, 26
Bar Stock, Production of, by Casting and Cold Extrusion, Hunter Engineering Company, 258
Cans, Deep-Drawn, Central States Can Corporation, 1072
Melting Furnace, Morgan Crucible Company, Ltd., 1026
Planking for the Construction of Truck Bodies, British Aluminium Company, Ltd., 596
Roof for Stadium Grandstand, 254
in Rolling Stock Exhibition, Centre International de Developpment de l'Aluminium, 44, 117
Scrap, Association of Light Alloy Refiners and Smelters, Ltd., 686
Smelting, 6000kW Silicon Rectifier for, Westinghouse Electric Corporation and Aluminium Company of America, 571
Strip Mill, Rogerstone Expansion, Alcan Industries Ltd., 635, 661
Surface Treatments, Durham Raw Materials, Ltd., 565; Pyrene Company Ltd., 364
Works at Kitts Green, Equipment for, James Booth Aluminium Ltd., 39

AMERICAN ENGINEERING NEWS

Alternating Gradient Synchrotron at Brookhaven National Laboratory, 446, 481
American Building Art—The Nineteenth Century, Carl W. Condit, (Review, 314)
Military Vehicles, R. M. Ogorkiewicz, 1054
Applications of Automatic Data Processing at the N.B.S. National Bureau of Standards, 330, 373
Astronautical Propulsion and Power Conversion Systems, Goodrich-High Voltage Astronautics Incorporated, 257
Automatic Bundling Machine for Billets and Wire Bars, Loma Manufacturing Company, 166
Grinding Machine for Gear Teeth, Michigan Tool Company, 46
Bonding of Dissimilar Metals, Ladd & Little Incorporated, 332
Cold Rolling Mill Expansion in New Jersey, Athenia Steel Division National-Standard Company, 651
Compact Apparatus for Generating High Pressure, National Bureau of Standards, 294
Diesel Locomotives in the United States, H. F. Brown, 926
"Electra" Accidents, The, 45
Fatigue of Concrete, American Concrete Institute, 820
14,000 Ton Extrusion Press in Indiana, Aluminium Company of America, 572
Gallium Arsenide Diodes, Bell Telephone Laboratories, 412
Phosphide Single Crystals, Bell Telephone Laboratories, 955
Gas Turbines in Japan, Boeing Airplane Company, 572
General Electric Strike, The, 953
Inert Atmosphere Processing Facility for Refractory Metals, Universal-Cyclops Steel Corporation, 410
Kinetic Experiment on Water Boilers, Atomics International, 571
Laminarised Aircraft, Northrop Corporation, 572
Launch of U.S.S. "Enterprise", Newport News Shipbuilding and Dry Dock Company, 1120
Low-Cost Reversing Narrow Strip Rolling Mill, Lowe Machine Manufacturing Company, 652
Machine Tool Exposition and Production Engineering Show at Chicago, 777, 818, 855, 911, 954
New Methods of Electric Power Generation, Westinghouse Electric Corporation, 84, 123
100 MeV Linear Electron Accelerator for the N.B.S. High Voltage Engineering Corporation, 519
Open Coil Processes of Annealing and Gas Alloying, Lee Wilson Engineering Company, 611, 650
Optical Maser Used in Communication Experiments, Bell Telephone Laboratories, 1035
Plasma and Astrophysics Research, National Bureau of Standards, 994
Plutonium Rolling Mill Installation, Loma Machine Manufacturing Company, 956
Potable Water Supply in Sealed Vehicles, General Electric Space Science Laboratory, 46
Production of Aluminium Bar Stock by Casting and Cold Extrusion, Hunter-Engineering Company, 258
Lathe with Multi-Cut Cycling, Monarch Machine Tool Company, 296
Quality Control of Concrete, Soiltest, Inc., 376
Satellite System for World-Wide Communications, Bell System, 518
Schwab Memorial Lecture, Earle C. Smith, 570
6000kW Silicon Rectifier for Aluminium Smelting, Westinghouse Electric Corporation and Aluminium Company of America, 571
Slow-Down in Semiconductors, 1034
Solar-Powered Interplanetary Probes, Northrop International, 484
Special Power Excursion Reactor Test in Idaho, U.S. Atomic Energy Commission National Reactor Testing Station, 163
Superconductivity and Radio Research, General Electric Co. Ltd., 996
360MW(e) Nuclear Power Station in California, Southern California Edison Company, 126
Transfer Machine for Motor Car Wheel Hubs, 1036
Machining of Tractor Rear Axle Housing, Cross Company, 165
Volatile Detonation Inhibitor, Socony Mobile Oil Company, 46
Welding and Machining by Electron-Beam Bombardment, United Aircraft Corporation, Hamilton Standard Division, 739

Amplifier, Tube Unit, Electron Beam, Parametric, Marconi Instruments Ltd., 456
Wideband, for Marine Transmitters, 37
An Engineer's View of Planning City Centres, R. Nicholas, 151
Analogue-Digital Computing System, Redifon, Ltd., 77
Analysis, Harmonic, of Nuclear Reactor Flux Noise, Record Replay System for the, J. A. J. Lawrence and E. R. Curran, (Report, 70)
Angle of Approach Indicators, (Patent, 741)
Anglesey, Nuclear Power Station for, Central Electricity Generating Board, 1023
Anglo-American Summer School on Industrial Archaeology, University of Manchester Extra-Mural (Extension) Department, 941
Animal Feeding Stuffs Mill in Belfast, Associated Feed Manufacturers, Ltd., 722
Annealing and Gas Alloying, Open Coil Processes of, Lee Wilson Engineering Company, 611, 650
Anniversary of German Railways, 125th, 1117
Annular Jet Ground Effect Machine, Britten-Norman, Ltd., 34
Answer is Simple, Mobil Oil Company, Ltd., 907
Anti-Collision Radio Equipment for Aircraft, (Patent, 449)
Anti-Tank Weapon, Pye Ltd., 422
Applied Electronics Laboratory, 807
Mechanics for Engineers: Statics, Dynamics, Strength of Materials, J. C. Grassie, (Review, 800)
Apprentices, Models for, (Leading Article, 170)
Wages, 214
Apprenticeship Schemes, Pirelli, Ltd., 115
Approach Communications and Navigation, Facilities, V.H.F., Elliott Brothers (London) Ltd., 455
Arbitration, Withholding of Certificates by the Engineer, W. H. D. Winder, 465
Arc Jet Rocket Engine 30kW, Avco Corporation, 384
Suppressing Device, (Patent, 87)
Welding Equipment, English Electric Company Ltd., 906
Welding and Flame Cutting Equipments, Shielded, Rubery Owen and Co., Ltd., 847
Arch Dam, Prestressed, Tourtemagne, 4
Architects and Engineers in Municipalities, Institution of Municipal Engineers, 984
Archaeology, Anglo-American Summer School on Industrial, University of Manchester Extra-Mural (Extension) Department, 941
Argentine and Chile, Mission to, Council of British Manufacturers of Petroleum Equipment, 476
Armour, Richard M. Ogorkiewicz, (Review, 104)
for Tyres, Bray Construction Equipment, Ltd., 1061
Articulated Dump Truck, Camill Engineering Company, Ltd., 947
Tanker, Yorkshire Engineering and Welding Company (Bradford) Ltd., 528
Torque Transmitting Couplings, (Patent, 957)
Asbestos Fabric, Aluminised, Minnesota Mining and Manufacturing Company, Ltd., 837
Asphalt and Coated Macadam Plant, Millars' Machinery, Ltd., 834
Mastic, Transporter, Gas-Fired, Braham, Patterson and Benham, Ltd., 799
Surfaces for the Forth and Severn Bridges, 6
Assembly Shop, De Laval Ljungstrom, 480 of Television Receivers, Mechanised, General Electric Company, Ltd., 203
Astronautical Propulsion and Power Conversion Systems, Goodrich-High Voltage Astronautics Incorporated, 257
Congress, International, Eleventh, Svenska Interplanetariska Sallskapet, 382
Astrophysics and Plasma Research, National Bureau of Standards, 994
Aswan High Dam, A. Aziz Ahmed, (Letter, 1052)
Schemes, The Two, Institution of Civil Engineers, 919
Atmosphere Near Ground Level, Radioactivity in the, Due to Distant Nuclear Test Explosion, (Report, 152)
Atmospheric Pollution, 390

AUSTRALIAN ENGINEERING NEWS

Australia, Scientific Research in, 807
Australian Aeronautical Researches, Aeronautical Research Laboratories, 1056
Australia's Import Trade, 476
Secondary Industries, Broken Hill Pty., Ltd., 702
Construction of 210ft. Radio Telescope for Australian C.S.I.R.O., 289
Continuous Casting Plant for Australia, Loma Machine Manufacturing Company, 956
Nuclear Power Prospects in Australia, W. H. Spooner, 272
Scientific Research in Australia, 807
Water and Australia, Institution of Engineers Australia, 289

Autocollimator, Photoelectric, Hilger and Watts Ltd., 63
Automatic Beryllium Monitor, Winston Electronics Ltd., 321
Burette Monitor, 600
Car Park Gate, Parking Corporation of America, 1023
Chucking Multi-Spindle Automatic, B.S.A. Tools, Ltd., 62
Chucking Turret Lathe, Gisholt Machine Company, 780
Clutch Control, Lockheed Hydraulic Brake Company, 598
Control of Lifts, (Patent, 378)
Control of Vehicle Variable-Speed Power Transmission, (Patent, 262)
Cutting of Transformer Core Plates, Ferranti, Ltd., 966
Data, Processing at the N.B.S., Applications of, National Bureau of Standards, 330, 373
Data Processing, Centralised, Allgemeine Elektricitats-Gesellschaft, 773
Direction-Finding Triangulation Systems, Standard Telephones and Cables Ltd., 456
Feed Attachment for Presses, Catmur Machine Tool Corporation, Ltd., 58
Multi-Unit Machine, Sykes Machine Tool Company, Ltd., 12
Oscillating Device, Hydraulically Driven, Hydraulic Machinery Drives Ltd., 321
Sawing Machine, Karl Stolzer Maschinenfabrik, 569
Tape Controlled Drilling Machine, Catmur Machine Tool Corporation, Ltd., 58
Telephone Systems, Party-Lines in, (Patent, 87)
Telex Exchange, 1023
Transfer Installation of Four Honing Machines, Micromatic Hone Corporation, 911
Turret Lathe, Gisholt Machine Company, 779
Warning System in Southern Region, 902
Water Sampler, Elcontrol, Ltd., 905
Weight Control, Elcontrol Ltd., 366
Wire and Strip Forming Machines, Heenan and Froude, Ltd., 13
Automatically Adjusted Fluid Pressure Actuator, (Patent, 168)
Automation in the Steel Industry, British Iron and Steel Research Association, (Leading Article, 696)
Automation and Instrumentation, Congress and Exhibition for, Interkama, 771
Automaton, Electronic Reading, Solartron Electronic Group, Ltd., 970

AUTOMOBILES

American Military Vehicles, R. M. Ogorkiewicz, 1054
Anbauvorrichtungen Beschleunigen LKW-Beladung, Hans Krieg, (Report, 70)
Annual General Meeting, The British Motor Corporation, Ltd., 907
Armour for Tyres, Bray Construction Equipment, Ltd., 1061
Automatic Car Park Gate, Parking Corporation of America, 1023
Clutch Operation, 320
Control of Vehicle Variable-Speed Power Transmission, (Patent, 262)
Automation on the Road, (Leading Article, 169)
Automobile Brake-Shoe Rolling Machine, King's Heath Engineering Company, Ltd., 731
"Bluebird" Project, Norris Brothers, Ltd., 508
Brake Having Automatic Torque Controlling Means, (Patent, 781)
Carbon Stack for Vehicle Control, T. H. Lewis, Ltd., 643
Commercial Road Vehicles, E. L. Cornwell, (Review, 194)
Motor Show, (Leading Article, 487), 526, 596
Compact Cars, 218
Cycle and Motor Cycle Show, 1960, 279, 842
Electronic Control of Road Vehicles, L. E. Flory, 175
Frameless Tipping Trailer, Anthony Company, 808
Further Truck and Tyre Evolution, Vauxhall Motors Ltd., 437
Heavy Vehicle Innovations, Scammell Lorries Ltd., 468
Vehicle Refinement, Leyland Motors, Ltd., 435
Historic Vehicles, Historic Commercial Vehicles Club, 453
Industry in Scotland, Rootes Motors, Ltd., 605
Measurement of Pedal Force, Robert Bosch, G.m.b.H., 910
Mechanised Car Park, Myton, Ltd., 683
Mobile Service Training Unit, British Motor Corporation, Ltd., 436
Motor Show, 1960, Society of Motor Manufacturers and Traders, Ltd., 672, 719
Vehicle Exports, Society of Motor Manufacturers and Traders Ltd., 76
Vehicle Testing, 207
Multi-Purpose Cross-Country Vehicle, E. Meili Traktoren-und Greiferräderfabrik, 816
New Citroen Plant, Citroen Company, 445
Self-Acting Trailer Brake, B. and B. Trailers, Ltd., 1025
Share Bid from U.S.A., Ford Motor Company, Ltd., 907
Universal Automobile Simulator, General Precision Systems, Ltd., 35
Vehicle Braking in Mountains, Ferodo, Ltd., 601
Vehicle Refinishing, Lewis Berger (Great Britain) Ltd., 513
Vehicle, The: Instrument of Land Usage, Patrick Horsburgh, 176

Autostrada del Sole: Bologna-Florence, 406
Autotanker, Thompson Brothers (Bilston) Ltd., 526
Auto-Tracer Lathe with Automatic Cycle Drum Control, James and Lamson Machine Company, 855
Aviation Show, Far Eastern, 1064
Avro "Blue Steel", Missiles, 420
"748", Hawker Siddeley Aviation Ltd., 418
Axial Multiple Plunger Pump, Swiss Locomotive and Machine Works (SLM), 409
Axle-Hung Traction, Self-Ventilated, Crompton Parkinson, Ltd., 561

B

Bag Packer, High-Speed, Thomas Robinson and Son, Ltd., 643
Balanced Stop Valve, British Ermeto Corporation Ltd., 424
"Bale-Master", Lambretta Concessionaires, Ltd., 71
Ball-Bearing Grinding Mills, (Patent, 1121)
Bearing Race Grinding Machine, Miniature, Van Norman Machine Company, 911
Nut and Screw Units, Recirculating, Precision Gear Machines and Tools, Ltd., 1059
Ballast Pump, De Laval Ljungström Turbine Company, 114
Band Conveyor, Steel, Edge Cracking of, G. C. C. Parker, T. Furman and K. W. Chandler, 1099
Sanders, Drum Abrasive, B. O. Morris, Ltd., 603
Saw Blades, (Patent, 334)
"Bandit", Sports Car, Berkeley, 672
Bandsawing Machine Fitted with a Hydraulic Feed Table, Startrite Machine Tool Company, Ltd., 15
Bank Station, Opening of the Trav-o-lators at, Otis Elevator Company, Ltd., 563
Banquet, Electrification Conference, 640
Barrel, Cylinder, (Patent, 221)
Barring Turbo-Alternators, Device for, (Patent, 297)
Bascule Bridges, A.C. Drives for Two, Crompton Parkinson, Ltd., 945
Base, The Holy Loch, (Leading Article, 784)
Basic Road Statistics, British Road Federation, Ltd., 530
Batching and Mixing Plant, Automatic Concrete, Winget, Ltd., 835
Timer, 811
Battery Electrodes, Covers for Electric, (Patent, 449)
Vehicle Control, (Patent, 573)
Beam, Distribution of Shear Stress in a Box, B. A. Walker, (Letter, 193)
Beams in Prestressed Concrete, Standardised Bridge, Cement and Concrete Association Prestressed Development Group, 507
Bearing Extractor, G. E. Simm Engineering Ltd., 320
Testing Heavily Loaded Plain, O. Holfelder, 504
Bed Lathe, 36in Swing Gap, Crawthorne Engineering Company, Ltd., 57
Beet Harvester, Stanhay (Ashford), Ltd., 971
Harvester, Self-Emptying Carrier, Catchpole Engineering Company, Ltd., 72
Sugar Model of Raking Machine for Discharging 120 tons per hour, Skoda Works, 689
Beilby Medal and Prize, 364
Belt Conveyor, High Angle, Richard Sutcliffe, Ltd., 474
Conveyor, Portable, Numec Ltd., 283
Conveyors, (Patent, 1037)
Belting, Conveyor, Development Laboratory, Dunlop Rubber Company, Ltd., 109
Bench Mark in London, Constructing a Precise, 729
Bending Rolls, Pinch Pyramid Plate, Bronx Engineering Company, Ltd., 942
Berkeley "Bandit" Sports Car, 672
Berkshire, By-Passes in, 68
Berth at Birkenhead, Tanker Cleaning, Mersey Tanker Services, Ltd., 901
Beryllium, Metallurgy of, International Conference, 1961, Institute of Metals, Nuclear Energy Committee, 935
Monitor, Automatic, Winston Electronics Ltd., 321
Bill, Public Health, 851
Billet Handling Equipment for Rotary Hearth Furnace, Hymatic Engineering Company, 945
Billets and Wire Bars, Automatic Bundling Machine for, Loma Manufacturing Company, 166
Binary Flutter, the Effect of Structural Damping on, E. G. Broadbent and Margaret Williams, (Report, 1058)
Binocular Rangefinder, National Research Development Corporation, 684
Birkenhead, Tanker Cleaning Berth, Mersey Tanker Services, Ltd., 901
Birmingham City Council, Re-location of Industry, 685
Engineering Centre, New Premises for, 812
-Preston Motorway Progress, John Laing and Son, Ltd., 768
Bistable Electronic Circuits, (Patent, 485)
Bitumen, Test Methods for, (B.S.I., 48)
Blades, Band Saw, (Patent, 334)
Blast Cleaner, Portable, Hodge Clemco, Ltd., 76
-Furnace, Low Load, for Iron Smelting, (Patent, 1073)
-Furnaces, Fuel Oil Injection in, Société des Acieries de Pompey, 909
Blasting, Experimental Studies of the Effects on Structures, A. T. Edwards and T. D. Northwood, 538
Blender, Aggregate, Variable Speed, Frederick Parker, Ltd., 946
Blind, Workshops for the, Ministry of Labour, 79
Blow-Moulding Machine, Amigo Machine Company, Ltd., 1065; Matthew Wylie and Co., Ltd., 1033
"Bluebird" Project, Norris Brothers, Ltd., 508
Blyth "A" Power Station, Central Electricity Generating Board, 28
Board Factory, Particle, Tyne Board Company, Ltd., 106
Boat Show, International, Ship and Boat Builders' National Federation, 1059
Bodies, Truck, Aluminium Planking for the Construction of, British Aluminium Company, Ltd., 596
Bogies for Rail Vehicle, (Patent, 573)

BOILERS

An Indirect Method of Measuring Static Temperature in Supersaturated Expanding Steam, Denis J. Ryley, 343
Compact Boiler Feed Turbopump, Pulsometer Engineering Company, Ltd., 1026
Experimental Boiler for Fuel Oil Combustion Research, K. J. MacKenzie, W. O. A. Morton, G. F. J. Murray and W. V. P. Ferguson, 548
Fatal Boiler Explosion, T. Henry Turner, (Letter, 758)
Kinetic Experiment on Water Boilers, Atomics International, 571
Spark Ignition Torch, Calor Gas (Distributing) Company, Ltd., 726

Boiling, Nucleate at Saturation Temperature, Analogy between the Bubbling of Air into Water and, G. B. Wallis, (Report, 8)
Bolt, Twelve-Point Headed, Standard Pressed Steel Company, 457
Bonding of Dissimilar Metals, Ladd & Little Incorporated, 332
Booster, Vacuum, with Mechanical Input and Output, Dunlop Rim and Wheel Company, Ltd., 722
Borer, Jig, Wickman, Ltd., 60
Jig, with Optical Measuring System, Stedall Machine Tool Company, Ltd., 57
Bores of Hollow Bodies, (Patent, 167)
Instrument for Measuring Very Small, P. W. Harrison and G. W. Severn, 467
Boring, Drilling and Milling Machine, Horizontal, Giddings and Lewis Machine Tool Company, 860
and Drilling Machine, Openside, American Tool Works Company, 857
and Drilling Machine, Semi-Automatic, Co-ordinate, Posalux Frautschi and Monney, 608
Machine, Fine, Stuart Davis, Ltd., 11
Machine, Horizontal, Selson Machine Tool Company, Ltd., 14
Machine, Hydraulic Thrust, E. Pass & Co. Ltd., 321
Machine, Precision, Fosdick Machine Tool Company, 856
Machine, Production, Rockwell Machine Tool Company, Ltd., 16
Machines, Optical Depth Control for Horizontal, H. W. Kearns and Co. Ltd., 765
Mill, Universal with Inclined Bed, Friedrich Deckel, 569
and Milling Machine, Horizontal, DeVlieg Machine Company, 914
and Turning Mill, Webster and Bennett, Ltd., 1060
Bottling Plant in Dublin, Batchelors Ltd., 212
Bourdon Tube Pressure and Vacuum Gauges, (B.S.I., 48)
Box Beam, Distribution of Shear Stress in a, W. G. Heath, (Letter, 104); B. A. Walker, (Letter, 193)
Bradwell Nuclear Power Station, Charge-Discharge Machines at, Strachan and Henshaw, Ltd., 804
Braille Printing, Improved, Chambon (Park Royal), Ltd., 848
Brake, Exhaust, Tractor Engine, David Brown Tractors, Ltd., 973
Friction, Hydraulically-Driven Motor with, (Patent, 1122)
Having Automatic Torque Controlling Means, (Patent, 781),
-Shoe Rolling Machine, Automobile, King's Heath Engineering Company, Ltd., 731
Tester, Weaver Manufacturing and Engineering Company, Ltd., 599
Trailer, Self-Acting, B. and B. Trailers, Ltd., 1025
Braking in Mountains, Vehicle, Ferodo, 601
Rheostatic, Institution of Locomotive Engineers, 1024
Brazing Paste Applicator, Electric Resistance Furnace Company, Ltd., 20
Breakdown Agent for Carbon Dioxide/Sodium-Silicate Moulding, Distillers Company, Ltd., 211
Crane, 250-ton Diesel Raiway, Cowans, Sheldon and Co. Ltd., 753
Breeder, Reactor Assembly, Zero Energy, "ZEBRA", United Kingdom Atomic Energy Authority, 74
Bridge Type Profile and Contour Milling Machine, Cincinnati Milling Machine Company, 913

BRIDGES

A.C. Drives for Two Bascule Bridges, Crompton Parkinson, Ltd., 945
Asphalt Surfaces for the Forth and Severn Bridges, 6
Bridge Beams in Prestressed Concrete, Cement and Concrete Association Prestressed Concrete Development Group, 507
Launcher of Light-Alloy, 33; V. L. Holloway, (Letters, 240, 352); A. A. Greenfield and R. B. W. Bolland, (Letter, 276)
Building the Towers of the Tamar Suspension Bridge, 242
Expansion Joints for Bridge and Like Roadways, (Patent, 377)
Glen Canyon Bridge, 5
Great Belt Bridge Report, 774
King Street Bridge, Melbourne, Utah Australia, Ltd., 514
Placing Bridge Beams by Crane, 248
Progress of the Runcorn-Widnes Bridge, 149
Queen's Bridge, Perth, 683
Riou Bourdou Railway Viaduct, 817
Severn Bridge, The, (Leading Article, 576), 603
Sixth International Congress on Bridge and Structural Engineering, 36
Standardised Bridge Beams in Prestressed Concrete, Cement and Concrete Association Prestressed Concrete Development Group, 507
Tancarville Bridge, 5

Bright Parts, 237
British Association at Cardiff, 463, 501
Commonwealth Scientific Committee, 153
Ford Convention in Hamburg, 854
Standards, Structural Steelwork and, W. A. Tuplin and A. N. Procter, (Letter, 240); W. A. Tuplin, (Letter, 104)
Steam Locomotive Since 1900, A. E. Durrant, (Letters, 800, 974)
Trade Fair Moscow, Association of British Chambers of Commerce, 769
Trade Fairs in Mexico, 769
Transport Commission, Films, (1116)
Brittleness in Steel, Dangerous, (Leading Article, 1000)
Broaches, Multiple Tooth, (Patent, 167)
Broaching, Slot, Machine, Large Turbine Disc, J. L. Jameson, Ltd., 494
Broadband Microwave Link in New Zealand, First, Standard Telephones and Cables, Ltd., 983
Broadcasting Local, and Radio Links, Pye Ltd., 362
Local, Plan for, Pye Ltd., (Leading Article, 695)
Bubble Content of Bubbly Oil, Methods of Measuring the, A. T. J. Hayward, (Report, 1058)
Buggy, Ingot, and Shuttle Car Scheme, R. B. Larkinson, 231
Building Art, American—The Nineteenth Century, Carl W. Condit, (Review, 314)
Industrial, Board of Trade, 605
New Imperial College, 846
Research, 1959, Building Research Station, 279
Built Girders, Geometric Properties of Rolled Sections and, Lloyd's Register of Shipping, (Review, 429)
Bulk Supply Tariff, Electricity, Central Electricity Generating Board, 1114
Bundling Machine for Billets and Wire Bars, Automatic, Loma Manufacturing Company, 166
Burette Monitor, Automatic, 600
Buses, Low-Height Double-Deck, Daimler, 526
Business Data Processing System, I.B.M. United Kingdom, Ltd., 158
Studies, Advanced, 812
Butadiene Acrylonitrile Vulcanised Rubber Compounds, Low Compression Set, (B.S.I., 88)
Butane/Air Plant at Hereford, W. C. Holmes and Co., Ltd., 981
Butted Tubes, Manufacture of, (Patent, 997)
Butyl, Rubber Components, Vulcanised, (B.S.I., 88)
By-Pass Motorway, Maidstone, Completion of, 981
Stafford, John Laing and Son Ltd., 36
Stamford, 767
By-Passes in Berkshire, 68

C

Cab Signalling and Train Speed Control Equipment, (Patent, 450)
Cable, Cross-Channel Power, Associated Electrical Industries, Ltd., and British Insulated Callender's Cables Ltd., 154
Railway Electrification, British Insulated Callender's Cables Group, 905
Submarine Direct to Sweden, 684
Tape, Technograph Electronic Products, Ltd., 762
Between the United Kingdom and the U.S.A. Transatlantic, 281
Cables, Apparatus for Measuring the Tension in, (Patent, 88)
Fault Monitor for Floor Warming, British Insulated Callender's Cables Ltd., "Panelec" Heating Division, 439
Mineral-Insulated, Part 1, Copper-Sheathed Cables, with Conductors, (B.S.I., 361)
Submarine Electric, (Patent, 521)
Cadmium Sulphide Photocells as Radiation Monitors, A.E.I. Radio and Electronic Components Division, 75
and Zinc on Iron and Steel, Electroplated Coatings of, (B.S.I., 791)
Calcium-Base Greases, (B.S.I., 88)
Calder Hall, Reactor Noise, Frequency Spectrum of, J. D. Cummins, (Report, 70)
Calibrating Mill, Tube, 688
Calibration Equipment, Flowmeter, Fischer and Porter, Ltd., 76
Optical Suspension Alignment, V. L. Churchill, 600
California, 360MW(e) Nuclear Power Station in, Southern California Edison Company, 126
Calorifier, a Small, Royles, Ltd., 564
Cam Milling Machine, Tape-Controlled, Brown and Sharpe Manufacturing Company, 913
Profiles, Gauging of, (Patent, 1037)
Camera, Television Prototype, British Broadcasting Corporation, 438
Television, Underwater, Marconi's Wireless Telegraph Company, Ltd., 1024
Canada, Television Transmitters for, Marconi's Wireless Telegraph Company, Ltd., 902
Canal Progress, Moselle, 216, 255, 290
Canberra Lake Project, 1068
"Canberra" S.S., Turbo-Electric Propulsion of, A.E.I. Heavy Plant Division, 831
Cans, Aluminium, Deep-Drawn, Central States Can Corporation, 1072
a Century-and-a-Half of, (Leading Article, 91)
Capacitors, Miniature Electrolytic, Plessey Company, Ltd., 726
Capital Expenditure, Board of Trade, 252, 476
Capstan Lathe, "2 D", Alfred Herbert, Ltd., 10
Car Ferry, "Egnatia", Passenger and, Societe des Chantiers Reunis Loire-Normandie, 610
Park Gate, Automatic, Parking Corporation of America, 1023
Park, Mechanised, Myton, Ltd., 683
Parking, the Problem of, Institution of Municipal Engineers, 113
Carbide and Acetylene Plant in Northern Ireland, British Oxygen Engineering, Ltd., 40
Carbides, Cemented, P. Schwartz Kopf and R. Kieffer, (Review, 195)
Carbon Dioxide, Oxidation of Steel by, Society of Chemical Industry, Corrosion Group, 27
Dioxide/Sodium-Silicate Moulding, Breakdown Agent for, Distillers Company, Ltd., 211
Stack for Vehicle Control, T. H. Lewis, Ltd., 643
Carbons Pantograph, "Morganite", The Morgan Crucible Company, Ltd., 624
Careers in Iron and Steel, 214
Cargo Ship G.T.V. "Rembrandt", Smith's Dock Company, 199
Caribbean Aeronautical Communications, 75
Carriages and Wagons, a Hundred Years of Railway, Gloucester Railway Carriage and Wagon Company Limited, 282
Wheeled, for Crane Outriggers, Steels Engineering Products, Ltd., 847
Cast Iron, Drilling, Production Engineering Research Association, 625
Casting and Cold Extrusion, Production of Aluminium Bar Stock by, Hunter Engineering Company, 258
Plant for Australia, Continuous, Loma Machine Manufacturing Company, 956
Castings, Better Plating on Die, British Non-Ferrous Metals Research Association, 236
Iron, Joint Iron Council, 404, 949
Machines, Ingot, (Patent, 957)
Cathode-Ray Oscillograph Seven Tube with Automatic Development of the Recording Paper, 773
Centenarian Workers, (Leading Article, 224)
Centenary of the Fairfield Shipbuilding and Engineering Company, Ltd., 846
Water Meter, Manchester Water Meter Company, Ltd., 973
Centralised Automatic Data Processing, Allgemeine Elektricitäts-Gesellschaft, 773
Production and Accounting System, "Z70", Zuse K.G., 774
Centre Drill, KESTAG, 817
Lathe, "Dynashift", Monarch Machine Tool Company, 820
Lathe, 20in Swing, R. K. LeBlond Machine Tool Company, 819
Centreless Grinding Machines, Arthur Scrivener, Ltd., 55
Centrifugal Pumps, Using, E. Allen, (Review, 1053)
CERN Computer, European Organisation for Nuclear Research, 910
Pneumatic Platform, European Organisation for Nuclear Research, 992
Change at Crewe, (Review, 891)
Channel Islands Services—S.S. "Caesarea", New Vessel for, G. W. Tripp, 975
Chaos, Railway, A. J. Field, (Letter, 974)
Charge-Discharge Machines at Bradwell Nuclear Power Station, Strachan and Henshaw, Ltd., 804
Face Transporter, Cranes (Dereham), Ltd., 1065
Charging Devices for Shafting Furnaces, (Patent, 333)
Chart Recorders, Integrator for, Honeywell Controls, 323
"Cheddarine", Machine for, National Institute for Research in Dairying, 366
Chemical De-Emulsification Agent, Glovers Chemicals Ltd., 402
Engineering, European Congress of, and Achema Congress, 1961, 83
Grout, Cyanamid of Great Britain, Ltd., 38
Laboratory, National, 725
Chesham Branch Electrified, London Transport, 475
Chile and Argentine, Mission to, Council of British Manufacturers of Petroleum Equipment, 476
Chimneys, Steel, Superwelds (Lewisham) Ltd., 322
Chrome Plating of Cylinder Liners, Hard, Laystall Cromard, Ltd., 604
Chuck, Collet, A. A. Jones and Shipman Ltd., 322
Permanent Magnet, Darwins, Ltd., 902
Chucking Automatic Lathe, Heavy Duty, Acbars, Ltd., 19
Automatic, Multi-Spindle, B.S.A. Tools, Ltd., 62
Automatic, Vertical Eight-Spindle, Thomas Ryder and Son, Ltd., 59
Machine, Single-Spindle, The National Acme Company, 855
Turret Lathe, Automatic, Gisholt Machine Company, 780
Turret Lathe, Precision, Warner and Swasey Company, 818
Chucks and Tool Holders, (Patent, 1121) for Drilling, (Patent, 1074)
Cinema, First German Drive-In, 162
Circuit Arrangements for Series-Wound Motors, (Patent, 1073)
Breaker, Air-Blast, (Patents, 127, 693)
Breaker Air-Blast, for Roof Mounting on Locomotives, Associated Electrical Industries, Ltd., 592
Breaker for 380kV, Air-Blast, 689
Breaker, High-Voltage Electric, (Patent, 47)
Breaker, Single-Phase, Air-Blast, A. Reyrolle and Co. Ltd., 560
Breakers, Contact Systems for Air Break, (Patent, 378)
Breakers, Oil Minimum, Fuller Electric, Ltd., 590
Circuits, Bistable Electronic, (Patent, 485)
Circulator Water, Temperature Controlled, Churchill Instrument Company, Ltd., 732
City Centres, an Engineer's View of Planning, R. Nicholas, 151
Centres, Rebuilding, (Leading Article, 130)
Civil and Public Health Engineering, R. F. Pearson, (Leading Article, 696)
Aviation, Signals Training for, Civil Aviation Signals Training Establishment, 36
Engineer—His Influence and Authority, Sir Herbert Manzoni, 746
Engineering Today, Rolt Hammond, (Review, 315)
Clamp, Ratchet Piston, Speed Tools, Ltd., 948
Clamps, Load, Fork Truck, R. H. Corbett & Co. Ltd., 440
Clean Air, Progress Towards, National Society for Clean Air, (Leading Article, 615)
Clebsch and Navier, Contributions to the Theory of Statically-Inderminate Frames, T. M. Charlton, 712
Cleaner, Ultrasonic, of 6 litres Capacity, Mullard Equipment Ltd., 282
Cleaning Berth, Tanker, at Birkenhead, Mersey Tanker Services, Ltd., 901
Clean-Up, Estuarial, Clean Rivers (Estuaries and Tidal Waters) Act, (Leading Article, 379)
"Cleansweep", Operation, National Industrial Safety Week, (Leading Article, 488)
Clip, Hose, Hand-Setting, Lightning Time Savers, 77
Clip-On Meter, Miniature, Ferranti, Ltd., 76
Clutch Control, Automatic, Lockheed Hydraulic Brake Company, 598
Diaphragm Spring, Laycock Engineering, Ltd., 598
Overload Slip, (Patent, 821)
Tolerating Indefinite Slip, Hydrostatic Transmission Acting as a, A. B. Asbrink and Co., 599
CO2, Welding Equipment, Mobile, Research and Control Instruments, Ltd., 111

COAL AND COKE

N.C.B. Equipment Developments, 113
O.E.E.C. Reviews Coal Situation, 122
British Coal Utilisation Research Association, 342
Coal Cutters and Methods of Mining Coal, (Patent, 522)
Cutting Apparatus, (Patent, 613)
Cutting and Like Mining Machines, (Patent, 413)
Fired Power Station Programmes, 36
Industry (Leading Article, 381)
Mining Hours, 159
Prices, National Coal Board, 512
Colliery Year Book and Coal Trades Directory, 1960, (Review, 315)
Cynheidre Colliery, National Coal Board, 904
Getting the Best Out of Coal, Construction Engineering Association, 643
Guide to the Coalfields, 1960, R. H. Walkerdine, (Review, 315)
Hawthorn Combined Mine, National Coal Board, 826
High-Speed Coal Shipping, Mitchell Engineering Ltd., 402
Lea Hall Colliery, 308
Machines for Cutting Coal, (Patent, 573)
Mining Research Establishment, National Coal Board, 1057
Mobile Screening and Stockpiling Conveyor, Michael and Partners Ltd., 400
On Not Burning Coal, (Leading Article, 299)
Purifying Coal Distillation Gases, (Patent, 297)
Renort on Coal Derivatives, Committee on Coal Derivatives, 319
Research in Coal-Mining, National Coal Board, Mining Research Establishment, (Leading Article, 1040)

Coastlines and Harbours, South African Research into, 254
Coated Macadam and Asphalt Plant, Millars' Machinery Ltd., 834
Coatings, Electroplated, of Cadmium and Zinc on Iron and Steel, (B.S.I., 791)
Co-Axial Plug, (Patent, 917)
Coal, Inductance, (Patent, 414)
Coils of Strip Material, Equipment for the Manipulation, De-Coiling, Fattening, Feeding, Cutting and Stacking of, Humphris and Sons, Ltd., 11
Coincidence Unit: a General Purpose Two Channel, A.E.R.E. Type No. 2013A, F. H. Wells, G. L. Godfrey and A. K. Barlow, (Report, 806)
Cold Extrusion and Casting, Production of Aluminium Bar Stock by, Hunter Engineering Company, 258
Forging Installation, Complete, Cold Forging, Ltd., and A. Nothelfer & Sohne, 649
Rolling Aluminium and its Alloys, Lubricants for, Metallurgical Engineering Committee, Institute of Metals, 581
Rolling Mill Expansion in New Jersey, Athenia Steel Division National-Standard Company, 651
Coldwater 600 kV Experimental Line, Hydro-Electric Power Commission of Ontario, 273, 311
Collapse, Scaffolding, Analysis of, E. E. Hendriksen, 793
Collet Chuck, A. A. Jones & Shipman Ltd., 322
Colliery, Cynheidre, National Coal Board, 904
"Colortard", Docker Brothers, 554
Columns, Steel, for Street Lighting, (B.S.I., 1050)
Combination Compasses, PIAB, 610
Combine Harvester, Massey-Ferguson, Ltd., 971
Harvester, Self-Propelled, International Harvester Company of Great Britain Ltd., 971
Combustion, Fuel Oil, Research, Experimental Boiler for, K. J. MacKenzie, W. O. A. Morton, G. F. J. Murray and W. V. P. Ferguson, 548
Laboratory at Egham, Shell Central Laboratory, 658
Commercial Motor Show, (Leading Article, 487), 526
Road Vehicles, E. L. Cornwell, (Review, 194)
Committee, Mobile Radio, Report, 681
Structure, Revision of E.R.A., Electrical Research Association, 562
Commonwealth Telecommunications Report, Commonwealth Telecommunications Board, 845
Communication and Navigational Aid Equipment V.H.F. "Sixty" Series, Marconi's Wireless Telegraph Company Ltd., 455
Satellite, Some Technical Aspects of, "Echo", 469
Communications and Navigational Aids, Standard Telephones and Cables Ltd., 455
Navigation and Approach Facilities, V.H.F., Elliott Brothers (London) Ltd., 455
Satellite "Courier", 642
Satellite System for World-Wide, Bell System, 518
Satellites, Symposium on, British Interplanetary Society, 1067
System, Flight Deck, The Plessey Company Ltd., 473
Compact Cars, 218
Compaction Rollers, Pneumatic Tyred, Armstrong Whitworth (Metal Industries) Ltd., 432
Comparator, Electric, Societe Anonyme d'Horlogerie LIP, 648
Comparators, Optical, Heston Aircraft and Associated Engineers Ltd., 285
Compasses, Combination, PIAB, 610
Compatible Pumps, Neumo, Ltd., 684
Competitive Design and the Road Problems, J. E. Dayton, 601
Components, Fuel Element, Magnesium Alloys for, Nuclear Energy Committee, Institute of Metals, 583
Composite Construction Using High-Tensile Steel "H"-Beams, Boulton and Paul, Ltd., 944
Compressed Air Filter, Doulton Industrial Porcelains, Ltd., 1062
Air Filters, Alfred Bullows and Sons, Ltd., 946
Compressor, Air, Screw Design, Sir George Godfrey and Partners (Industrial), Ltd., 940
Plant, Air, Output and Dewpoint Tests on, Lacy-Hulbert and Co., Ltd., 1016
Refrigeration, Model "CKD 4 VD 260A", 688
Compressors, Rotary, (Patent, 413)
Computer Conference in Harrogate, British Computer Society, Ltd., 153
Digital, Applied to the Design of Salient-Pole Synchronous Machines, G. K. Ridley, 705
Diodes, Ultra-Fast, Hughes International (U.K.), Ltd., 811
Drum Miniature, IBM United Kingdom Ltd., 441
European Organisation for Nuclear Research (CERN), 910
for Agricultural Statistics, Department of Agriculture and Fisheries, 730
Programmes, Library of, Institution of Civil Engineers, 686
Computers, Selling, in Europe, Elliott Brothers (London), Ltd., 725
Computing, Future Techniques in, Elliott Brothers (London) Ltd., 394
Productivity in, Associated Electrical Industries, Ltd., 111
System, Analogue-Digital, Redifon, Ltd., 77

CONCRETE

Automatic Concrete Batching and Mixing Plant, Winget, Ltd., 835
Batching Timer, 811
Concrete and Soil-Cement Roads, W. P. Andrews, (Review, 277)
Durability of Reinforced Concrete in Seawater, The, (Report, 759)
Examples of the Design of Reinforced Concrete Buildings, C. E. Reynolds, (Review, 503)
Fatigue of Concrete, American Concrete Institute, 820
Fourth International Congress on Prestressed Concrete, 1116
Glass-Fibre Reinforced Concrete Pipes, Sharp Jones & Co. Limited, 361
Measuring the Workability of Concrete, R. Davies and J. M. Hawkes, (Letter, 392)
Pan Mixer for Concrete, Blaw Knox, Ltd., 510
Production of Concrete Piles, (Patent, 653)
Quality Control of Concrete, Soiltest, Inc., 376
Ready-Mixed Concrete Plant at Fulham, Greenham Ready Mixed Concrete, Ltd., 40
Reinforcement for Concrete, Reinforced Concrete Association's Committee on Steel Supplies, 1027
Spannbetonbau, Part I, W. Hereberg, 1053
Standardised Bridge Beams in Prestressed Concrete, Cement and Concrete Association Prestressed Concrete Development Group, 507
Third International Congress of the Federation Internationale de la Precontrainte, (Review, 314)

Condensers, Graphite Cartridge, Powell Duffryn Carbon Products, Limited, 365
Conditions of Contract, Use of the I.C.E., Federation of Civil Engineering Contracts, 252
Conductivity, Induced, Detection of Gamma Radiation by, C. G. Clayton, 280

Conductors, Water-cooled Copper, Copper Development Association, 699
Conference and Exhibition, Instruments and Measurements, 217
I.E.A.E., General, 646
British Railways Electrification, 587
on Data Processing, British Productivity Council, 1023
on Gearing, International, 445
in Harrogate, Computer, British Computer Society, Ltd., 153
on Machine Tool Design and Research, University of Birmingham, Department of Mechanical Engineering, 208
on Machine Translation of Languages and Applied Language Analysis, International, (1116)
on Non-Destructive Testing in Electrical Engineering November, 1961, Measurement and Control Section, Institution of Electrical Engineers, 198
on Operational Research, Second International, International Federation of Operational Research Societies, 648
on Road Research, Proposed International, O.E.E.C., 158
Conferences, International, Disturbing Trends at, (Leading Article, 50)
Congress and Exhibition for Instrumentation and Automation, Interkama, 771
and Exhibition, Second Ilmac, 217
Eleventh International Astronautical, Svenska Interplanetariska Sallskapet, 382
Heat Treatment, 409
of Chemical Engineering and Achema Congress, 1961, European, 83
on Bridge and Structural Engineering, Sixth International, 36
on Prestressed Concrete, Fourth International, 1116
Connecting Arrangements, Electrical, (Patent, 1037)
Connectors, Plug-and-Socket, Belling and Lee, Ltd., 564
Plug, Electrical, (Patent, 1121)
Constant Torque Variable Speed Reduction Unit, Fairbairn, Lawson, Combe, Barbour, Ltd., 112
Construction, Ministry of Works, 988
Equipment Exhibition, 141
Sites, Safety Officers for, 812
Using High-Tensile Steel "H"-Beams, Composite, Boulton and Paul, Ltd., 944
Work Overseas, Board of Trade, 442
Consultants and Overseas Port Construction, (Leading Article, 2)
Contact, Device Sliding, (Patent, 261)
Resistance of Metal Sheet, Siemens-Schuckerwerke A.G., 952
Systems for Air-Break Circuit Breakers, (Patent, 378)
Contactless Control Elements Arranged as Building Units for Training and Study, Siemens, 773
Contactors, Electromagnetic, (Patent, 521)
Miniature, Londex, Ltd., 77
Contacts, Electric, (Patent, 262)

CONTINENTAL ENGINEERING NEWS

I.A.E.A. General Conference, 646
O.E.E.C. Reviews Coal Situation, 122
Agard Meetings, 444
Air-Blast Circuit Breaker for 380kV, 689
Bleed Turbines, Auto Diesels Ltd., 409
Aluminium in Rolling Stock Exhibition, Centre International de Developpement de l'Aluminium, 44, 117
Anniversary of German Railways, 125th, 1117
Autostrada del Sole: Bologna-Florence, 406
Axial Multiple Plunger Pump, Swiss Locomotive and Machine Works (SLM), 409
Blow-Moulding Machine, Matthew Wylie and Co., Ltd., 1033
Centre Drill, KESTAG, 817
CERN Computer, European Organisation for Nuclear Research, 910
Pneumatic Platform, European Organisation for Nuclear Research, 992
Congress and Exhibition for Instrumentation and Automation, Interkama, 771
Contact Resistance of Metal Sheet, Siemens-Schuckertwerke A.G., 952
De Laval Ljungstrom Assembly Shop, 480
Dinslaken Refinery, BP Benzin und Petroleum A.G., 910
Dual-Purpose Milling Machine, AB Sandéns Mekaniska Verkstad, 1033
Dutch Rubber Plant, Royal Dutch/Shell Group, 517
Effluent Purification in Germany, 81
Electric Comparator, Societe Anonyme d'Horlogerie LIP, 648
Engines for Europe, Aspera Motors, 220
European Congress of Chemical Engineering and Achema Congress, 1961, 83
Course in Sanitary Engineering, Delft Technical University, 44
Research in Space, 1033
Explosion Fuse, Calor-Emag, 992
Factory for the Production of Rock Drilling Equipment, Sandvik Steelworks Company, Ltd., 1033
First German Drive-In Cinema, 162
Floating Exhibition, European Fair Company, Ltd., 993
French Nuclear Developments, Commissariat à l'Energie Atomique, 853
Fuel Oil Injection in Blast-Furnaces, Société des Acieries de Pompey, 909
Godorf Refinery Opened, Deutsche Shell A.G., 517
Grande Dixence Scheme, 951
Great Belt Bridge Report, 774
Saint Bernhard Road Tunnel, 735, 775
Hanover Machine Tool Exhibition, 568, 608, 649
Heat Treatment Congress, 409
Heavy Locomotive for Ore Line, ASEA, 952
High-Voltage Insulators with Helicoidal Sheds, 161
Transformer 375/MVA, ASEA, 217
Hoist Crab, Lauf-Bungert and Winnesberg, K.G., 83
Hydrofoil Boat for Stockholm-Mariehamn Service, Cantiere Navale Leopoldo Rodriquez, 993
Immersion Refractometer, Carl Zeiss, 480
Inauguration of Mol Nuclear Fuel Processing Plant, 162
Injection Moulding Machine, Triulzi of Milan, 816
Instruments and Measurements Conference and Exhibition, 217
International Conference on Gearing, 445
Film Festival, 444
Iron Gate Project, 445
Jet Flame Drilling and Working of Stone, Union Carbide Europa, S.A., 162
Karlsruhe Nuclear Research Centre, 369
Korneuburg Power Station, 815
Liner "Leonardo Da Vinci", Societa Azioni Ansaldo, 329
Laying of Keels of Italian Liners, Societa Azioni Ansaldo, 569
Marine Diesel Engine 25,000 b.h.p., A/S Burmeister and Wain, 1032
Magnetic Suspension of Wind Tunnel Models, Office National d'Etudes et de Recherches Aeronautiques, 607
Measurement of Pedal Force, Robert Bosch, G.m.b.H., 910
Micro Flash Unit, Carl Zeiss, 445
Projection Apparatus, Carl Zeiss, 480
Mont Blanc Road Tunnel, 478, 515
Moselle Canal Progress, 216, 255, 290
Multi-Purpose Cross-Country Vehicle, E. Meili Traktoren-und Greiferräderfabrik, 816
New Citroen Plant, Citroen Company, 445
Life for Polluted Lakes, Industriforbundets Vattenvardsbyra, 372
Oxygen Pipe Network, Oxylor, 162
Passenger and Car Ferry "Egnatia", Societe des Chantiers Reunis Loire-Normandie, 610
"Plastics in Industry" Exhibition at Leningrad, I.C.I. Plastics Division, 122
Platform Crane for Lorries, Steinbock G.m.b.H., 445
Projected Plastic Factory at Rotterdam, N.V. Rotterdamse Polyolefinen Maatschappij, 610
Prolongation of Halden Reactor Project, 610
Re-Railing Equipment, Frieseke and Hoepfner G.m.b.H., 690
Research Reactor "Diorit" Critical, Reaktor A.G., 409
Riou Bourdou Railway Viaduct, 817
Rotterdam-Rhine, Pipeline in Operation, N.V. Rotterdam-Rijn Pijpleiding Maatschappij, 122
Safety on the Roads, Arbeits und Forschungsgemeinschaft für Stadtverkehr und Verkehrssicherheit, 910
Shower Handpiece, Siemens-Electrogeräte A.G., 517
Second Ilmac Congress and Exhibition, 217
International Conference on Operational Research, International Federation of Operational Research Societies, 648
Reactor for Karlsruhe, 951
Self-Supporting Plastic Cylinder for Television Aerial, Siemens and Halske Aktiengesellschaft, 952
Silicon Rectifiers in Main Line Service, French National Railways, 292
Slipring-Free Torque Gauge, ASEA, 993
Some Exhibits from the Brno Trade Fair, 688
Suction-Dredger "Ramses", 372
Tannery Effluent Purification, Atlas Copco Greece, 444
Turbodrilling of Exploratory Bore-Holes, Ets, Neyrpic, 444
Underfloor Wheel Lathe for Railway Vehicles, Wilhelm Hegenscheidt, K.G., 687
Universal Punching and Shearing Machine, Valdarno S.A., 993
Vianden Pumped Storage Scheme, 326
Water Pollution Control in Europe, Economic Commission for Europe, 293

Continuous Casting Plant for Australia, Loma Machine Manufacturing Company, 956
Level Indicator, Thomas Industrial Automation Ltd., 247
Measurement of Density by Means of Gamma Ray Absorption, Allgemeine Elektricität's-Gesellschaft, 773
Contour and Profile Milling Machine, Bridge Type, Cincinnati Milling Machine Company, 913
Milling Machine, Horizontal, Giddings and Lewis Machine Tool Company, 859
Milling Machine, Large Special Purpose, Coventry Gauge and Tool Company, Ltd., 985
Contouring Machine with Tape Control, Ex-Cell-O Corporation, 912
System, Numerical, Bendix Corporation, 915
Contract, Conditions of, Use of the I.C.E. Federation of Civil Engineering Contractors, 252
Control, Automatic, of Lifts, (Patent, 378)
Automatic, of Vehicle Variable-Speed Power Transmission, (Patent, 262)
Battery Vehicle, (Patent, 573)
Electric Motor, (Patent, 694)
Elements, Contactless Arranged as Building Units for Training and Study, Siemens, 773
Gear Works Extension, M.T.E. Control Gear, Ltd., 1021
and Indication, Level, Thomas Industrial Automation Ltd., 1023
Notchless, and Silicon Rectifiers in Motor Coach, English Electric Company, Ltd., 601
Numerical, 777
Optical Depth, for Horizontal Boring Machines, H. W. Kearns and Co. Ltd., 765
Panel, Mains-Failure Generator, Southern Instruments, Ltd., 943
and Plant, Sewage, Recent Developments at Mogden, 887
for Pneumatic Rams, T.A.L. Numatics Ltd., 155
of Road Vehicles, Electronic, L. E. Flory, 175
System for Eastern Region Feeder Stations, Remote Supervisory, Standard Telephones and Cables, Ltd., 591
System for Electrically Propelled Vehicles, (Patent, 413)
System, Point-to-Point Positioning, Sperry Gyroscope Company, Ltd., 915
Thermostatic, of Electric Storage Heaters, (Patent, 297)
Controller, Transistorised with Proportional and Integral Action, Allgemeine Elektricitäts-Gesselschaft, 773
Controls, Refrigeration, Harold H. Eggington, (Review, 715)
for Industry, Lord Citrine, 685
Convention, British Ford, in Hamburg, 854
First Effluent and Water Treatment Exhibition and, 681
on Space Research, Radio Convention on, British Institution of Radio Engineers, 400
Conversion Scheme on the Welsh Border, Railway, 984
Conveying Equipment, Mobile Pneumatic, F. E. Callow (Engineers), Ltd., 1062
Conveyor Belt, High Angle, Richard Sutcliffe, Ltd., 474
Belting Development Laboratory, Dunlop Rubber Company, Ltd., 109
with Hydraulic Motor Drive, Short Portable, National Coal Board Central Engineering Establishment, 113
Mobile Screening and Stockpiling, Michael and Partners, Ltd., 400
Portable Belt, Numec Ltd., 283
Steel Band, Edge Cracking of, G. C. C. Parker, T. Furman and K. W. Chandler, 1099
Conveyors, (Patent, 694)
Belt, (Patent, 1037)
Hydraulic Drive for Mine, Richard Sutcliffe, Ltd., 944
Cooling Air for Food Packet Sealing, Kellogg Company, 282
Latent Heat, and Waste Heat Recovery in Diesel Engines, Diesel Engineers and Users Association, (Leading Article, 824)
Unit, Thermoelectric, Salford Electric Instruments, Ltd., 809
Co-operation between Industry and Education, Industrial Training Council, 733
Co-ordinate Drilling and Boring, Machine, Semi-Automatic, Posalux Frautschi and Monney, 608
Copper Conductors, Water-Cooled, Copper Development Association, 699
Sheathed Cables with Conductors, Mineral-Insulated Cables Part 1, (B.S.I., 361)
Copy Lathe, Facing, Sykes Machine Tool Company, Ltd., 12
Turning Lathe, B.S.A. Tools, Ltd., 61
Copying Machine, Microfilm, Ozalid Company, Ltd., 985
Core Plates, Transformer, Automatic Cutting of, Ferranti, Ltd., 966
Corrosion, Control of, 319
Metallic, First International Congress on: London, 1961, 935
Protection of Gas Plant and Equipment from, Corrosion Group of the Society of Chemical Industry, 670
County Surveyor on Roads, (Leading Article, 697)
Coupling, "Flexsil", Silentbloc, Ltd., 720
Plastic Pipe, Hozelock, Ltd., 1064
Rubber, for Propeller Shafts with Hooke's Joints, 598
Couplings for Pipes, (Patent, 653)
for Pipes, Flexible, Aero Controls Ltd., 457
Thermostatically Controlled, Smith's Motor Accessories, Ltd., 599
Torque Transmitting, Articulated, (Patent, 957)
Covers for Electric Battery Electrodes, (Patent, 449)
Crab, Hoist, Lauf-Bungert and Winnesberg, K.G., 83
Cracking, Edge, of Steel Band Conveyor, G. C. C. Parker, T. Furman and K. W. Chandler, 1099
Crane, Breakdown, 250-ton Diesel Railway, Cowans Sheldon and Co. Ltd., 753
Capacity for South African Harbours Increase in, South African Railways, 814
Jib, Stiffness of, J. F. Eden and R. H. Wood, 181; M. J. Gercke, (Letter, 1108)
for Lorries, Platform, Steinbock G.m.b.H., 445
Outriggers, Wheeled Carriages for, Steel Engineering Products, Ltd., 847
Overhead, Wheel Flange Lubrication, Acheson Colloids, Ltd., 850
Placing Bridge Beams by, 248
Shipyard, 100-ton, Travelling, Monotower, Butters Brothers & Co. Limited, 385
Cranes, Mobile Tower, for Two- and Three-Storey Building, (Report, 759)
Portable, Improvements in or Relating to, (Patent, 1073)
Travelling, Electric Overhead, K. E. Booth and W. S. Cartwright, 789
Crankshaft Transfer Line, Three-Station, Norton Company, 857
Turning Lathe, Heavy Duty, Henry Broadbent Ltd., 249
Crankshafts with Lubrication Tubes, Hollow Cast, (Patent, 653)
Crash Position Indicator, (Patent, 861)
Crawler Tractor, 60 h.p., International Harvester Company of Great Britain, Ltd., 155
Credit Terms, Export, 733
Credits Guarantee Department, Export, 286
Crewe, Change at, (Review, 891)
Crib Revolutionary in Greece, (Leading Article, 657)
Cross-Channel D.C. Power Link, Rectifier Transformers for, Fuller Electric, Ltd., 682
Power Cable, Associated Electrical Industries, Ltd., and British Insulated Callender's Cables, Ltd., 134
Cross-Country Venicle, Multi-Purpose, E. Meili Traktoren-und Greiferrädertabrik, 816
Crude Oils, Pumpability of Waxy, V. S. Swaminathan, 280
Cryogenics, Progress in, K. Mendelssohn, (Review, 547)
Crystal Units, Piezo-Electric, (Patent, 693)
Crystals, Gallium Phosphide Single, Bell Telephone Laboratories, 955
Cunard Liner, New, (Leading Article, 617)
Current Collection Studies, Pantograph, British Insulated Callender's Cables Ltd., 679
Controllers, Infinitely Variable, (Patent, 693)
Curve, Mass Haul, F. Bettess, 341
Customers' Visits, Organising, (Leading Article, 489)
Cut-Off and Throttle Governing of Petrol Engines, Investigation of, Mahmoud Hassaan Saadawi, 1083
Trench for a Reservoir Embankment, Excavating the, Thyssen Shaft Sinking Company, Ltd., 668
Cutters, Coal, and Methods of Mining Coal, (Patent, 522)
Face, Milling, Wickman Ltd., 285
Cutting Apparatus, Coal, (Patent, 613)
Coal, Machines for, (Patent, 573)
Flame, and Arc Welding, Equipments, Shielded, Rubery Owen and Co., Ltd., 847
of Transformer Core Plates, Automatic, Ferranti, Ltd., 966
Cycle and Motor-Cycle Show, 1960, 279, 842
Cylinder Barrel, (Patent, 221)
Liner, Doxford, Temperature Measurements in, B. W. Millington, 871
Liners, Hard Chrome Plating of, Laystall Cromard, Ltd., 604
Master, Tandem, Girling, 808
Reinforced, for Nuclear Reactor Pressure Vessel, Design of, R. W. Lakin and S. S. Gill, 495
Self-Supporting Plastic, for Television Aerial, Siemens and Halske Akiengesellschaft, 952
Cylindrical Cell Approximation in Lattice Calculations, Errors Due to, (Report, 152)
Grinding Machine, Cincinnati Milling Machine Company, Grinding Machine Division, 858
Grinding Machine, Precision, Coventry Gauge and Tool Company, 322
Work, Drill Jig for, Revel Engineering Company, Ltd., 810
Cynheidre Colliery, National Coal Board, 904

D

D.S.I.R. Research, Industrial Value of, Water Pollution Research Laboratory, 892, 922; G. F. Arkless, (Letter, 466)
Dam, High, Aswan, A. Aziz Ahmed, (Letter, 1052)
Malpasset, W. R. Mitchell, (Letter, 503)
Prestressed Arch, Tourtemagne, 4
Spelga, 108
Warragamba, 787
Damper, Tuned, and its Vector Diagram, G. S. Pidd, 531
Dartford-Purfleet Tunnel, Traffic Survey for, Traffic Engineering Study Group, 849
Data Monitoring and Display, Redifon Ltd., 323
Processing, Advanced, Leo Computers, Ltd., 156
Processing Centralised Automatic, Allgemeine Elektricitäts-Gesellschaft, 773
Processing, Conference on, British Productivity Council, 1023
Processing at the N.B.S., Applications of Automatic, National Bureau of Standards, 330, 373
Processing, Report on, European Productivity Agency, 920
Processing System Business, IBM United Kingdom, Ltd., 158
Damping, Internal, Due to Structural Joints and Techniques for General Damping Measurement, D. J. Mead, (Report, 8)
Structural, the Effect of, on Binary Flutter, F. G. Broadbent and Margaret Williams, (Report, 1058)
Deburring Machine, Gear, Burrows and Smith, Ltd., 1063
De-Emulsification Agent, Chemical, Glovers Chemicals Ltd., 402
Deep-Drawn Aluminium Cans, Central States Can Corporation, 1072
Definite-Time Earth Fault Relay, English Electric Company, Ltd., 850
De-Icing Rotating Wings, D. Napier and Son, Ltd., 251
De Laval Ljungstrom Assembly Shop, 480
Delay Line, Magnetostriction, Variable, Ferranti Electric, Inc., 730
Delta, Narrow, Handley Page, "H.P.115", 454
De-Nationalisation of Steel, Iron and Steel Holding and Realisation Agency, 1066
Density, Continuous Measurement of by Means of Gamma Ray Absorption, Allgemeine Elektricitäts-Gesellschaft, 773
Denth Control, Optical, for Horizontal Boring Machines, H. W. Kearns and Co. Ltd., 765
Design Appreciation for Engineers, Council of Industrial Design, (Leading Article, 416)
Competive, and the Road Problems, J. E. Dayton, 601

for Flight: The Kurt Tank Story, Heinz Conradis, (Review, 65)
of Reinforced Concrete Buildings, Examples of the, C. E. Reynolds, (Review, 503)
and Research Conference, Machine Tool, First, (Leading Article, 576); Hugh Clausen, 629
Research, and Utilisation, Machine Tool, D. F. Galloway, 1081
and Testing, Transformer, English Electric Company, Ltd., 664
Determination of Gases in Metals, Symposium on the, 237
Destiller-und Rektifiziertechnik, Emil Kirschbaum, (Review, 467)
Detonation Inhibitor, Volatile, Socony Mobile Oil Company, 46
Development Laboratory, Conveyor Belting, Dunlop Rubber Company, Ltd., 109
of X-Ray Pictures, Rapid, Rank-Xerox, Ltd., 727
Dewpoint and Output tests on Air Compressor Plant, Lacy-Hulbert and Co., Ltd., 1016
Diaphragm Operated Valves, High-Pressure, British Arca Regulators Ltd., 440
Pumps, (Patent, 573)
Spring Clutch, Laycock Engineering, Ltd., 598
Diaphragms, Gas-Compatible Meter, 107
Dictionary of Electronics and Nuclear Engineering, Encyclopedic, Robert I. Sarbacher, (Review, 715)
of Terms Used in the Theory and Practice of Mechanical Engineering, J. G. Horner, (Review, 143)
"Dido" Research Reactor, Power Rise for, 1114
Die Castings, Better Plating on, British Non-Ferrous Metals Research Association, 236
Forging and Upsetting Machine, L. Schuler, A.G., 569
Dielectric Heating Apparatus, (Patent, 261)
Dies, Moulds and Forming Tools, (Patent, 1122)
Diesel-Electric Pullman Trains, British Railways, London Midland Region, 29
Electric Tug "Llanwern", P. K. Harris and Sons Ltd., 103
Engine, Four-Stroke, 269 c.c. Air-Cooled, Villiers Engineering Company, Ltd., 799
Engine, Large Bore Marine, Sulzer Brothers, Ltd., 1077
Engine, Marine, 25,000 b.h.p. A/S Burmeister and Wain, 1032
Engine, "Six 354", Direct Injection, Perkins Engines, Ltd., 836
Engine, Small High-Speed, Villiers Engineering Company, Ltd., 641
Engines, 5¼in by 6in, Cummins and Rolls-Royce, 837
Engines, Latent Heat Cooling and Waste Heat Recovery in, Diesel Engineers and Users Association, (Leading Article, 824)
Locomotive Maintenance Depot, British Railways, Eastern Region, 509
Locomotive Problems, (Leading Article, 959)
Locomotive, 2000 b.h.p., Fried. Krupp Maschinenfabriken, 1070
Locomotives, British Railways Type 4, 1025
Locomotives in the United States, H. F. Brown, 926
Ram for Pile-Drivers, (Patent, 378)
250-ton Railway Breakdown Crane, Cowans Sheldon and Co. Ltd., 753
Diesinking Machine, Three-Dimensional Automatic, George H. Alexander Machinery, Ltd., 15
Digests Technical European, European Productivity Agency, 362
Digital Computer, Applied to the Design of Salient-Pole Synchronous Machines, G. K. Ridley, 705
Printer, Monitoring System with, Bailey Meters and Controls, Ltd., 810
Recorder, Electronic, Microcell, Ltd., 625
Dinner, "James Watt", Institution of Engineers and Shipbuilders in Scotland, (Leading Article, 656)
Diodes, Computer, Ultra-Fast, Hughes International (U.K.), Ltd., 811
Gallium Arsenide, Bell Telephone Laboratories, 412
Tunnel, in Production, Texas Instruments, Ltd., 903
"Diorit" Research Reactor, Critical, Reaktor, A.G., 409
Dip. Tech. (Eng.) Progress, (Leading Article, 3)
Direct Current Supply from an Alternating Source, (Patent, 741)
Injection Diesel Engine, "Six 354", Perkins Engines, Ltd., 836
Injection Engine for Vehicle Use, Perkins Engines Ltd., 530
Reduction of Iron Ore, Head Wrightson and Co. Ltd., 156
Direction Finder, (Patent, 128)
Finder for Small Craft, Pye, Ltd., 565
Finding Triangulation System, Automatic, Standard Telephones and Cables Ltd., 456
Direct-Writing Oscillograph Recorder, Savage and Parsons Limited, 321
Discharge, Devices, Liquid Cathode, (Patent, 449)
Lamps, Electric, Operating Circuits for, (Patent, 221)
Lamps, Fluorescent Electric, (Patent, 221)
Lamps for General Purposes, Electric, 109
Lamps, Low Pressure Electric, (Patent, 997)
Switching Devices for Radar Equipment, (Patent, 262)
Tubes, Fluid Cooling of High Power, (Patent, 128)
"Discoverer" Satellite Programme, U.S.A.F. Ballistic Missile Division, 383
Dispenser for Rubber Lubricant with Storage for Brush and Mop, 720
Display Unit, Counting Instruments, Ltd., 731
Disposal of Radioactive Waste, 647
Disulfation Gases Coal Purifying, (Patent, 297)
District Line Resignalling, London Transport, 563
Ditching Machine, Barber-Greene Olding and Co., Ltd., 836
Dividing Equipment, Electronically-Controlled, Gear Grinding Company, Ltd., 18

DOCKS AND HARBOURS

Consultants and Overseas Port Construction, (Leading Article, 2)
Descriptive Brochure, Smith's Dock Company Ltd., 511
Dock and Harbour Engineering, E. V. Burke, (Letters, 239)
East London Harbour, R. D. Williams, (Letter, 104)
Handbook der Werften, 1958, K. Wendel, (Review, 467)
Increase in Crane Capacity for South African Harbours, South African Railways, 814
Milford Haven Launch Jetty, 363

Dollis Hill, Post Office Research at, 592
Domestic Heat Pump, Jonmil Building Developments, Ltd., 902
Switches, Automatic Testing Jig for, The General Electric Company Limited, 471
Dosimeter, a Sensitive Direct-Reading Pocket Size-Gamma, J. H. Howes, (Report, 213)
Double Action 750-ton Press, Wilkins and Mitchell, Ltd., 58
Deck Buses, Low-Height, Daimler, 526
Rotor Hammermill, General Electric Company, Ltd., 798
Dounreay Fast Reactor, Institution of Mechanical Engineers, 978, 1011, 1046, 1105
Downstroking Hydraulic Barnes Press, George Cohen, Sons and Co. Limited, 13
Doxford Cylinder Liner, Temperature Measurements in, B. W. Millington, 871
"P" Range of Engines, William Doxford and Sons (Engineers) Ltd., 31
Drag, Hydrodynamic, of a Shallowly Pitted Surface, J. R. D. Francis, 532
"Dragon" in Embryo, (Leading Article, 299)
High Temperature Reactor, O.E.E.C. High-Temperature Reactor Project, 302
Drafting Table, Universal with Electronic Positioning, G. Coradi A.G., 771
Drainage, Land, and Water Supply, (Leading Article, 863)
Drakelow-C Power Station, Supercritical Generating Units for, Central Electricity Generating Board, 313
Drawing Office Equipment, E. N. Mason and Sons, Ltd., 74
Press with Compound Crank Drive, 250 tonne, Fried Krupp Maschinenfabriken, 569
"Dreadnought" H.M.S., (Leading Article, 655)
Dredger, Suction "Ramses", 372
Drifter, Heavy, Holman Brothers, Ltd., 798
Drill, Centre, KESTAG, 817
Jig for Cylindrical Work, Revel Engineering Company, Ltd., 810
Stands, Magnetic, Magco Ltd., 439
Drilling, Boring and Milling Machine, Horizontal, Giddings and Lewis Machine Tool Company, 860
and Boring Machine, Openside, American Tool Works Company, 857
and Boring, Machine, Semi-Automatic, Co-Ordinate, Posalux Frautschi and Monney, 608
Cast Iron, Production Engineering Research Association, 625
Chucks for, (Patent, 1074)
Machine, Automatic Tape Controlled, Catmur Machine Tool Corporation, Ltd., 58
Machine, Duplex Head, Multi-Spindle, Kitchen and Wade, Ltd., 768, 808
Machine, Horizontal Co-Ordinate, James Archdale and Co. Ltd., 54
Machine, Six-Face Turret Head, with Numerical Control System, Reliance Electric and Engineering Company, 954
Machine, Turret, Alfred Herbert, Ltd., 10
Machine, Turret Design, Wickman, Ltd., 60
for Rock Tunnelling, "Ladder", Atlas Copco, Ltd., 947
Set-Ups, Special Purpose, R. S. Brookman, Ltd., 13
and Tapping Machine with Automatic Indexing Table, James Archdale and Co. Ltd., 249
and Tapping Machine, Radial, A. Kitchen-D. Walker, Ltd., 942
and Working of, Stone, Jet Flame, Union Carbide Europa, S.A., 162
Stands, Magnetic, Magco, Ltd., 439
Drills, Rock, Portable Thruster Rig for, Holman Brothers, (Proprietary) Ltd., 38
Drive-In Cinema, First German, 162
Drives for Industry, Electric Motor, J. M. Ferguson, 716
Driving and Seeing, Road Surfaces, J. M. Waldram, 594, 632
Drum Abrasive Band Sanders, B. O. Morris, Ltd., 603
Miniature, Computer, IBM United Kingdom Ltd., 441
Dry Materials, Volumetric Feeder for, Simon Handling Engineers, Ltd., 726
Dryer, Grain, Gravity Flow, Ransomes, Sims and Jefferies, Ltd., 971
Drying, Flash, International Combustion Products, Ltd., 726
Dual-Carriageway Lighting, (Patent, 450)
Dublin, Bottling Plant in, Batchelors, Ltd., 212
Ducted Fan, Bristol Siddeley BS-75, 454
Ducting, Expansion Joint for High-Pressure, Richardsons Westgarth & Co. Ltd., 400
Dump Truck, Articulated, Camill Engineering Company, Ltd., 947
Truck, 22 tons capacity, Thos. W. Ward, Ltd., 799
Dumper, Muir-Hill 6 cubic yard, 835
6 cubic yard, E. Boydell and Co., Ltd., 835
7½ cubic yard, Northfield Industrial Fabrications, Ltd., 948
Dungeness Lighthouse, 206
Nuclear Power Station, Central Electricity Generating Board, 153
Duplex Head Multi-Spindle Drilling Machine, Kitchen and Wade, Ltd., 768, 808
Durability of Reinforced Concrete in Seawater, The, (Report, 759)
Dust and Fume Emissions, Stopping, (Leading Article, 49)
Dutch Rubber Plant, Royal Dutch/Shell Group, 517
Dynamics of Vibrations, General, Y. Rocard, (Review, 974)
Dynamo-Electric Machine, (Patent, 87)

E

East Africa, Diesel Locomotives for, Robert Stephenson and Hawthorns, Ltd., 365
London Harbour, R. D. Williams, (Letter, 104)
Earnings, Overseas, 851
Professional Engineers', Engineers' Guild, 965
Earth Fault Relay, Definite-Time, English Electric Company, Ltd., 850
Proving Supply Point, Nalder Brothers and Thompson, Ltd., 625
Working Machines, (Patent, 781)
Eccentrically Loaded, Riveted Joints, Tests on, A. J. Francis and G. L. Belcher, 177
"Echo" Satellite, Signals Via, 437
Economy, Germany, a Major Drag on the, (Leading Article, 1001)
Edge Cracking of a Steel Band Conveyor, G. C. C. Parker, T. Furman and K. W. Chandler, 1099

EDUCATION

A Prize-Giving Worth Reporting, W. H. Allen, (Leading Article, 865)
Academic Awards, 807
Advanced Business Studies, 812
Agricultural Training Centre, Agricultural Engineers Association, 566
Anglo-American Summer School on Industrial Archaeology, University of Manchester Extra-Mural (Extension) Department, 941
Apprenticeship Schemes, Pirelli, Ltd., 115
Change in I.C.E. Examinations, 686
Co-operation Between Industry and Education, Industrial Training Council, 733
Crib Revolutionary in Greece, (Leading Article, 657)
Design Appreciation for Engineers, Council of Industrial Design, (Leading Article, 416)
Dip.Tech. (Eng.). Progress, (Leading Article, 3)
Education for Industry, British Employers Confederation, 324
Electronic Reading Automaton, Solartron Electronic Group, Ltd., 970
European Course in Sanitary Engineering, Delft Technical University, 44
Exchange of Students for Technical Experience, International Association for the Exchange of Students for Technical Experience, 769
Form Recognition System, (Patent, 88)
Gauge and Tool Makers' Educational Trust, (Leading Article, 301)
Industrial Training Council, 988
Training in Operational Research, British Iron and Steel Research Association, 115
Mobile Service Training Unit, British Motor Corporation Ltd., 436
Models for Apprentices, (Leading Article, 170)
New Imperial College Building, 846
Overseas Better Trained Than Home Graduates?, (Leading Article, 783)
Students in Britain, London Conference on Overseas Students, 680
Practical Training for Engineers, R. Dobson, (Letter, 714)
Training for Engineers, Institution of Mechanical Engineers, (Leading Article, 524); E. G. Bayley, (Letter, 758)
Recruitment and Training, Federation of British Industries, 367
Sandwich Courses, Ministry of Education, 442
Signals Training for Civil Aviation, Civil Aviation Signals Training Establishment, 36
Specialisation, John Marsh, 566
Study and Use of Metals, Institution of Metallurgists, 757
Summer School in Electrical Engineering, Associated Electrical Industries, Ltd., 153
Teaching of Metallurgy to Engineers, T. Henry Turner, 1110
Training Boys in Industry, Industrial Training Council, 367
of Home Graduates, (Leading Article, 784)
for Industry, 79
for Tool Making, 807
Young People, British Association for Commercial and Industrial Education, 566
Youth Employment and Further Education, Crowther Report, 159

Efficiency Fuel Progress Survey, National Industrial Fuel Efficiency Service, (Leading Article, 616)
Effluent Purification in Germany, 81
Purification, Tannery, Atlas Copco Greece, 444
and Water Treatment Exhibition and Convention, First, 681
Egham, Combustion Laboratory at, Shell Central Laboratory, 658
Elastic Semi-Infinite Medium Bounded by a Rigid Wall with a Circular Hole, (Report, 1113)
"Electra" Accidents, The, 45

ELECTRICAL ENGINEERING

Air-Blast Circuit-Breakers, (Patents, 127, 693)
Alternating Current Frequency Converters, (Patent, 485)
Applied Electronics Laboratory, 807
Arc-Suppressing Device, (Patent, 87)
Automatic Control of Lifts, (Patent, 378)
Testing Jig for Domestic Switches, The General Electric Company Limited, 471
Bistable Electronic Circuits, (Patent, 485)
Blyth "A" Power Station, Central Electricity Generating Board, North Eastern Division, 28
Coal Fired Power Station Programmes, 36
Coldwater 600kV Experimental Line, Hydro-Electric Power Commission of Ontario, 273, 311
Conference on Non-Destructive Testing in Electrical Engineering, November, 1961, Measurement and Control Section, Institution of Electrical Engineers, 198
Contact Systems for Air-Break Circuit Breakers, (Patent, 378)
Cross-Channel Power Cable, Associated Electrical Industries, Ltd. and British Insulated Callender's Cables, Ltd., 154
Covers for Electric Battery Electrodes, (Patent, 449)
Cylindrical Post Insulators, (Patent, 821)
Definite-Time Earth Fault Relay, English Electric Company, Ltd., 850
Device for Barring Turbo-Alternators, (Patent, 297)
Dielectric Heating Apparatus, (Patent, 261)
Digital Computer Applied to the Design of Salient-Pole Synchronous Machines, G. K. Ridley, 705
Display Unit, Counting Instruments, Ltd., 731
Direct Current Supply from an Alternating Source, (Patent, 741)
Dual-Carriageway Lighting, (Patent, 450)
Dynamo Electric Machine, (Patent, 87)
Electric Comparator, Societe Anonyme d' Horlogerie LIP, 648
Contacts, (Patent, 262)
Discharge Lamps for General Purposes, 109
Furnaces, (Patent, 48)
Induction Furnaces, (Patent, 997)
Locomotive Depot, Longsight, British Railways, London Midland Region, 112
Motor, (Patent, 1037)
Motor Control, (Patent, 694)
Motor Drives for Industry, J. M. Ferguson, 716
Overhead Travelling Cranes, K. E. Booth, and W. S. Cartwright, 789
Valve Actuators, Rotork Engineering Company, Ltd., 76
Electrical Accidents, (Leading Article, 656)
Engineering in the Royal Navy, Sir Hamish MacLaren, 626
Engineers Exhibition, 401
Equipment Practice, (Patent, 87)
Frequency Meters, (Patent, 1073)
Null Indicator, Honeywell Controls, Ltd., 250
Plant Manufacture in India, (Leading Article, 825)
Plug Connectors, (Patent, 1121)
Positional Control Apparatus, (Patent, 414)
Electrically-Operated Reservation System, (Patent, 261)
Electricity in Aircraft, Joint Meetings on Applications of, Institution of Electrical Engineers and Royal Aeronautical Society, 765
Bulk Supply Tariff, Central Electricity Generating Board, 1114
Supply and Research, (Leading Article, 523)
"Electrics" and Electronics in Aircraft, Lord Caldecote, 897
Electrifying the Hard Way, (Leading Article, 744)
Electromagnetic Contactors, (Patent, 521)
Fields Energy and Forces, Robert M. Fano, Lan Jen Chu and Richard R. Adler, (Review, 428)
Electron Guns, (Patent, 127)
Electronics in Transport, British Transport Commission, 563
Equipment for Railway Electrification, British Railways Electrification Conference, 560, 590, 624
Expulsion Fuse-Switch Certified for 150 MVA at 11kV, Johnson and Phillips, Ltd., 157
Extended Range of High-Voltage Switch-Fuse Units, Line Equipment, Ltd., 112
Fault Locator for Transmission Lines, Ferranti, Ltd., 761
Monitor for Floor Warming Cables, British Insulated Callender's Cables Ltd., "Panelec" Heating Division, 439
Flexible Transmission, (Patent, 613)
Fluid Blast Electric Switches, (Patent, 47)
Cooling of High Power Discharge Tubes, (Patent, 128)
Fluorescent Electric Discharge Lamps, (Patent, 221)
Lighting Equipment Production, Atlas Lighting, Ltd., 803
Frequency-Modulated Oscillator, (Patent, 298)
Fuel Cells, (Patent, 521)
Germanium and Silicon Power Rectifiers, J. C. Read, 533; D. R. Coleman, (Letter, 838); D. B. Corbyn, (Letter, 669)
Heavy-duty Composite Units of Air-Break Switches and Fuses, 109
High Energy Plasmas in Electrical Engineering, J. J. Matthews, 306

Voltage Electric Circuit-Breakers (Patent, 47)
Voltage Insulators with Helicoidal Sheds, 161
Voltage Resistors, Welwyn Electric, Ltd.
Voltage Transformer 375/MVA, ASEA, 217
Improved Motor Speed Controller, Servomex Controls Ltd., 283
Improvements to Electrically Propelled Vehicles, (Patent, 741)
in Induction Motors, (Patent, 485)
in Variable Voltage Transformers, (Patent, 168)
Induction Heaters, H.F., Research and Control Instruments Ltd., 473
Industrial Switchgear, Midland Electric Manufacturing Co. Ltd., 440
Infinitely Variable Current Controllers, (Patent, 693)
Instruments and Measurements Conference and Exhibition, 217
Kincardine Power Station, South of Scotland Electricity Board, 618
Korneuburg Power Station, 815
Large Electricity Supply Systems, International Conference on Large Electric System, (C.I.G.R.E.), 7, 52
Lightweight X-ray Unit, Pantak, Ltd., 765
Limit Switches, (Patent, 781)
Liquid Cathode Discharge Devices, (Patent, 449)
Low Pressure Electric Discharge Lamps, (Patent, 997)
Magnetic Switching Circuits, (Patent, 298)
Mains-Failure Generator Control Panel, Southern Instruments, Ltd., 943
Manufacture of Heavy Electric Equipment, Associated Electrical Industries Ltd., 288
Margam "B" Power Station, Steel Company of Wales, 101
Mineral-Insulated Cables, Part 1, Copper-Sheathed Cables with Conductors (B.S.I., 361)
Miniature Electrolytic Capacitors, Plessey Company, Ltd., 726
Moulded Circuit Boards, Albright and Wilson (Mfg), Ltd., 74
New Methods of Electric Power Generation, Westinghouse Electric Corporation, 84, 123
Overload Protection for Lifts, (Patent, 297)
"Packaged" Weatherproof Switching Station, English Electric Company, Ltd., 904
Plug-and-Socket Connectors, Belling and Lee, Ltd., 564
Progress on Hunterston Nuclear Power Station, Simon-Carves Atomic Energy Group, 555
Rectifier Installations, (Patent, 861)
Transformers for Cross-Channel D.C. Power Link, Fuller Electric, Ltd., 682
Relay Construction, (Patent, 1121)
Resistor Test Set, Solartron Laboratory Instruments, Ltd., 849
Rubber Gloves for Electrical Purposes, (B.S.I., 48)
Second Power Station at Tilbury, 808
Selling Computers in Europe, Elliott Brothers (London) Ltd., 725
Single-Phase Motors, (Patent, 333)
Sizewell Nuclear Power Station, English Electric, Babcock and Wilcox, Taylor Woodrow Atomic Power Group, 936
Sliding Contact Device, (Patent, 261)
Some Notes of the Possible Application of Thermo-Electric Devices to the Generation of Electric Power, (Report, 759)
Submarine Electric Cables, (Patent, 521)
Summer School in Electrical Engineering, Associated Electrical Industries, Ltd., 153
Superconductive Switching Device, (Patent, 1037)
Supercritical Generating Units for Drakelow-C Power Station, Central Electricity Generating Board, 313
Supergrid 400kV, Central Electricity Generating Board, 1023
Synchronous Electric Motors, (Patent, 861)
Tape Cable, Technograph Electronic Products, Ltd., 762
Transport Mechanism, Redifon, Ltd., 728
Thermoelectric Cooling Unit, Salford Electric Instruments, Ltd., 809
Thermometer Type Voltage Indicator Tube, (Patent, 127)
Thermostatic Control of Electric Storage Heaters, (Patent, 297)
Transformer, (Patent, 449)
Transmission System 800kV D.C., Stalingrad-Donbass, E. S. Groiss, A. V. Posse and V. E. Touretski, 66
Vapour-Cooled Valves for Industrial Heaters, Radio Heaters, Ltd., 946
Variable Magnetostriction Delay Line, Ferranti Electric Inc., 730
Variable Resistance Devices, (Patent, 47)
"Vintage" Electric Motor for Indian Museum, Crompton Parkinson, Ltd., 75
Water-Cooled Copper Conductors, Copper Development Association, 699

Electro-Hydraulic Servo Valve, Keelavite Hydraulics, Ltd., 18
Electrolytic Capacitors, Miniature, Plessey Company, Ltd., 726
Electromagnetic Contactors, (Patent, 521)
Fields Energy and Forces, Robert M. Fano, Lan Jen Chu and Richard R. Adler, (Review, 428)
Electro-Magnetism, Picking Ore by, 785
Electron, Accelerator for the N.B.S. 100 MeV Linear, High Voltage Engineering Corporation, 519
Beam Bombardment, Welding and Machining by, United Aircraft Corporation, Hamilton Standard Division, 738
Beam Parametric Amplifier Tube Unit, 456
Guns, (Patent, 127)
Electronic Circuits, Bistable, (Patent, 485)
Control of Road Vehicles, L. E. Flory, 175
Digital Recorder, Microcell, Ltd., 625
Extensometer, U.K. Atomic Energy Authority, 731
Instruments for the Automatic Evaluation of Recordings, 772
Level Measurement, Electronic Machine Company Ltd., 323
and Radio Engineers, Introduction to Laplace Transforms for, W. D. Day, (Review, 839)
Railway-Signal Interlocking, Mullard Equipment, Ltd., 1022
Telephone Central Office, Bell Telephone Laboratories, 1071
Telephone Exchange System, Experimental, Highgate Wood, 938
Electronics and "Electrics" in Aircraft, Lord Caldecote, 897
Laboratory, Applied, 807
in Medicine, Institution of Electrical Engineers, Electronics and Communications Section, and International Federation for Medical Electronics, 204
and Nuclear Engineering, Encyclopaedic Dictionary of, Robert L. Sarbacher, (Review, 715)
for Spectroscopists, C. G. Cannon, (Review, 241)
in Transport, British Transport Commission, 563
Electroplated Coatings of Cadmium and Zinc on Iron and Steel, (B.S.I. 791)
Electroplating Wastes and Oil, Pollution from, Water Pollution Research Laboratory, 892, 922
Elevated Runway Lighting Fittings, High-Intensity, (B.S.I., 88)
Elevating and Tipping Equipment, Conveyancer Fork Trucks, Ltd., 37
Embankment, Reservoir, Excavating the Cut-Off Trench for a, Thyssen Shaft Sinking Company, Ltd., 668
Employment, Ministry of Labour, 115, 286, 476, 644, 812, 1027
Encyclopaedic Dictionary of Electronics and Nuclear Engineering, Robert L. Sarbacher, (Review, 715)
"Energy Transfer" Ignition System, Joseph Lucas, Ltd., 843
Engine-Room Explosion in "Capetown Castle", 728
ENGINEER, THE, printing, at Southend, Eden Fisher (Southend) Ltd., 602
Engineer, Health and the, (Leading Article, 452)
Professional, Engineers' Guild, 1027
and Statics, Sir Alfred Pugsley, 424
Withholding of Certificates by the, Question of Arbitration, W. H. D. Winder, 465
Engineering Centre, Birmingham, New Premises for, 812
Civil, and Public Health, R. F. Pearson, (Leading Article, 696)
Mechanical, Scientist's Contribution to, Owen A. Saunders, 760
Production, Board of Trade, 79, 252, 442
Properties of Alloys, 582
Properties of Nickel-Base Alloys, 580
and Shipbuilding Wages, 605
Statistics, Board of Trade, 769
Wages, Engineering and Allied Employers' National Federation, 949
Engineers and Architects in Municipalities, Institution of Municipal Engineers, 984
at the British Association, (Leading Article, 451)
Earnings, Professional, Engineers' Guild, 965
and Industrial Accidents, A. A. Beckingsale, 459
Practical Training for, Institution of Mechanical Engineers, (Leading Article, 524); R. Dobson, (Letter, 714)
Remuneration of, Engineers' Guild, (Leading Article, 960)
A Scientist on, British Association for the Advancement of Science, (Leading Article, 379)
and Scientists, Recruitment to Government Service, Civil Service Commissioners, (Leading Article, 616)
Teaching of Metallurgy to, T. Henry Turner, 1110
Engines for Europe, Aspera Motors, 220
English Electric and the G.E.C., 566, 949
Envelope, Re-Usable, Seal for, Envopak, Ltd., 1026
Equipment for the Manipulation, De-Coiling, Fattening, Feeding, Cutting and Stacking of Coils of Strip Material, Humphris and Sons, Ltd., 11
Equipment for Railway Electrification, 624
Ergonomics in Industry, Department of Scientific and Industrial Research, 512
Erith, "Nuclear Clean" Workshop at, General Electric Company, Ltd., 675
Errors Due to Cylindrical Cell Approximation in Lattice Calculations, (Report, 152)
Estuarial Clean-up, Clean Rivers (Estuaries and Tidal Waters) Act, (Leading Article, 379)
Europe, Engines for, Aspera Motors, 220
Export Council for, 733
European Course in Sanitary Engineering, Delft Technical University, 44
Research in Space, 1033
Technical Digests, European Productivity Agency, 362
Evaluation of Recordings, Automatic Electronic Instrument for, 772
Evolution of the Workshop Micrometer, C. St. C. Davison, 196
Examinations, Changes in I.C.E., 686
Excavating the Cut-Off Trench for a Reservoir Embankment, Thyssen Shaft Sinking Company, Ltd., 668
Excavator, Hydraulic, J. C. Bamford (Excavators), 797
and Shovel, Hydraulic, Whitlock Bros., Ltd., 508
3/4 Cubic Yard Capacity, R. H. Neal and Co., Ltd., 798
Exchange of Students for Technical Experience, International Association for the Exchange of Students for Technical Experience, 769
Telex, Automatic, 1023
Exciting Address, An, (Leading Article, 745)
Exhaust Brake, Tractor Engine, David Brown Tractors, Ltd., 973

EXHIBITIONS

Agricultural Machinery Show at Earls Court, Royal Smithfield Show and Agricultural Machinery Exhibition, 929, 971
Aluminium in Rolling Stock Exhibition, Centre International de Developpement de l'Aluminium, 44, 117
British Trade Fair, Moscow, Association of British Chambers of Commerce, 769
Trade Fairs in Mexico, 769
Commercial Motor Show, (Leading Article, 487), 526, 596
Congress and Exhibition for Instrumentation and Automation, Interkama, 771
Construction Equipment Exhibition, 141
Cycle and Motor-Cycle Show, 1960, 279, 842
Electrical Engineers Exhibition, 401
Far Eastern Aviation Show, 1064
First Effluent and Water Treatment Exhibition and Convention, 681
Floating Exhibition, European Fair Company, Ltd., 993
Hanover Machine Tool Exhibition, 568, 608, 649
International Boat Show, Ship and Boat Builders' National Federation, 1059
International Machine Tool Exhibition, 9, 54
Machine Tool Exposition and Production Engineering Show at Chicago, 777, 818, 855, 911, 954
Machinery at the Royal Show, 71
More About Farnborough, Society of British Aircraft Constructors, (Leading Article, 451)
Motor Show, 1960, Society of Motor Manufacturers and Traders, Ltd., 672, 719
Physical Society Exhibition, 1961, 845
"Plastics in Industry" Exhibition at Leningrad, I.C.I. Plastics Division, 122
Public Works Exhibition, 797, 834
Radio Hobbies Exhibition, Radio Society of Great Britain, 441
Radio Show, 1960, 362
Road Safety, (Leading Article, 223)
Royal Society's Tercentenary Exhibition, 208
Second Ilmac Congress and Exhibition, 217
Some Exhibits from the Brno Trade Fair, 688

Expansion Joint for High-Pressure Ducting, Richardsons, Westgarth & Co. Ltd., 400
Joints for Bridge and Like Roadways, (Patent, 377)
Experiments on Piston Controlled Port, R. S. Benson, 875
Explosion, Boiler, Fatal, T. Henry Turner, (Letter, 758)
Fuse, Calor-Emag, 992
in "Capetown Castle" Engine-Room, 728
Explosions in Mines, Gas, (Leading Article, 453)
Export Council for Europe, 733, 851
Credit Terms, 733
Credits Guarantee Department, 286
and Import, Prices, Board of Trade, 286
Knowledge About Graphite, The General Electric Company, Ltd., 725
Trends, 214
Exports, (Leading Article, 129)
Agricultural Machinery, Agricultural Engineers Association, 644
Discussed at Annual General Meeting, Horseley Bridge and Thomas Piggott, Ltd., 512
Motor Vehicle, Society of Motor Manufacturers and Traders, Ltd., 76
Rural Industries, Rural Industries Bureau, 367
Sterling Area, 851
Expulsion Fuse-Switch Certified for 150 MVA at 11KV, Johnson and Phillips, Ltd., 157
Extensometer, Electronic, U.K. Atomic Energy Authority, 731
External Affairs, Confusion in, (Leading Article, 89)
Extraction, Theoretical, D. J. G. Ives, 27
Extractor, Bearing, G. E. Simm Engineering Ltd., 320
Extrusion, Cold, and Casting, Production of Aluminium Bar Stock, by Hunter Engineering Company, 258
Press in Indiana, 14,000-ton, Aluminium Company of America, 572
the Relative Merits of, Metallurgical Engineering Committee, Institute of Metals, 583

F

Face Milling Cutters, Wickman Ltd., 285
Facing Copy Lathe, Sykes Machine Tool Company, Ltd., 12
and Internal Grinder, Maschinenfabrik Spandau, 649
Factories, Fire Fighting in, Ministry of Labour, 685
Washing Facilities in, Ministry of Labour, 214
Factory Inspector's Report, 476
Fan, Ducted, Bristol Siddeley BS-75, 454
Far Eastern Aviation Show, 1064
Faraday Lecture, 1960/61, Institution of Electrical Engineers, 508
Farm Machinery Finishes, Cellon, Ltd., 158
Farnborough, More About, Society of British Aircraft Constructors, (Leading Article, 451)
Fast Reactor, Dounreay, Institution of Mechanical Engineers, 978, 1011, 1046, 1105
Fatigue of Concrete, American Concrete Institute, 820
Investigations, Thermal, M. Cox and E. Glenny, 346
Testing, Programmed, Problems Involved in the Development of, T. R. G. Williams and D. H. Hughes, 703
Tests on Structural Components, 20-ton Capacity Pulsator, Suitable for, 1029
Fault Locator for Transmission Lines, Ferranti, Ltd., 761
Monitor for Floor Warming Cables, British Insulated Callender's Cables Ltd., "Panelec" Heating Division, 439
Relay, Earth, Definite-time, English Electric Company, Ltd., 850
Feeder, Vibrating, Magco, Ltd., 283
Volumetric, for Dry Materials, Simon Handling Engineers, Ltd., 726
Feeding Device for the Tool in Machine Tools, (Patent, 917)
Stuffs, Animal, Mill in Belfast, Associated Feed Manufacturers, Ltd., 722
Ferry, "Egnatia", Passenger and Car, Societe des Chantiers Reunis Loire-Normandie, 610
Passenger, "Woodchurch", Mersey, Philip and Son, Ltd., 41
Filing or Sawing Tool, Pneumatic, Consolidated Pneumatic Tool Company, Ltd., 947
Film Festival, International, 444
Films, British Transport Commission, 1116
Industrial, Federation of Civil Engineering Contractors, 1027
Filter, Compressed Air, Doulton Industrial Porcelains, Ltd., 1062
Filters, Compressed Air, Alfred Bullows and Sons, Ltd., 946
Fine Boring Machines, Stuart Davis, Ltd., 11
Finishes, Farm Machinery, Cellon, Ltd., 158
Finishing Operation, Transfer Machines for High-Precision, Cross Company, 219
Fire Alarm, Self-Contained, Fire Cry-er, Ltd., 846
Fighting in Factories, Ministry of Labour, 685
Protection Conference, National, Proceedings, (Review, 241)
Research Laboratories, 792
Resistance Tests, Sponsored, on Structural Elements, (Report, 928)
Five Year Plan, India's Third, 288
Flame Cutting and Arc Welding, Equipment: Shielded, Rubery Owen and Co., Ltd., 847
Flash Unit, Micro, Carl Zeiss, 445
Drying, International Combustion Products, Ltd., 726
Flat-Rising Jet V.T.O.L., Hawker "P. 1127", 943
Flexible Couplings for Pipes, Aero Controls, Ltd., 457
Hydraulic Hose, I.C.I. Terylene, 215
Transmission, (Patent, 613)
Fliesspressen von Stahl, Heinz D. Feldman, (Review, 839)
Flight Deck Communications System, The Plessey Company Ltd., 473
Research, Full Scale, Short SB-5, 724
Floor Strengthening, Temporary, Hydraulic Pit Props for, Dowty Mining Equipment, Ltd., 1113
Warming, Cables Fault Monitor for, British Insulated Callender's Cables Ltd., "Panelec" Heating Division, 439
Flow Control Valves, (Patent, 821)
Fluid, Valves for Controlling, (Patent, 377)
Forming and Spinning Lathe, Automatic, Leifeld and Co., 609
Indicators, Lubricant, Alan Muntz and Co. Ltd., 157
Indicators for Opaque Liquids, Sir W. H. Bailey and Co., Ltd., 1061
Mass, and the Mixing Process in Low-Velocity Air-Ejectors, L. J. Kastner and J. B. McGarry, 190
Vortex, Generated by a Sharp Leading Edge having 65 Degrees Sweep, some Measurements in the, N. C. Lambourne and D. W. Bryer, (Report, 806)
Flowmeter Calibration Equipment, Fischer and Porter, Ltd., 76
for Very Slow Speeds in Water, Miniature, Sir W. G. Armstrong Whitworth Aircraft, Ltd., 774
for Liquids, Firth Cleveland Instruments Ltd., 284
Fluid Blast Electric Switches, (Patent, 47)
Mechanics Laboratory Equipment, J. A. Sandover, 227
Pressure Actuator, Automatically adjusted, (Patent, 168)
Seals, British Hydromechanics Research Association, 366
Cooling of High Power Discharge Tubes, (Patent, 128)
"Fluid-Form" Process, Hugo Möller, 968
Fluorescent Electric Discharge Lamps, (Patent, 221)
Lighting Equipment Production, Atlas Lighting, Ltd., 803
Flutter, Binary, the Effect of Structural Damping on, E. G. Broadbent and Margaret Williams, (Report, 1058)
Food Packet Sealing, Cooling Air for, Kellog Company, 282
Forage Box, Lundell (Great Britain) Ltd., 73
Ford Convention in Hamburg, British, 854
Forging, Cold, Complete Installation, Cold Forging, Ltd., and A. Nothelfer & Sohne, 649
Die, and Upsetting Machine, L. Schuler, A.G., 569
Fork Truck, Electric, Lansing Bagnall, Ltd., 39
Truck Load Clamps, R. H. Corbett & Co. Ltd., 440
Form Recognition System, (Patent, 88)
Forming Tools, Moulds and Dies (Patent, 1122)
Forth, and Severn Bridges, Asphalt Surfaces for the, 6
Foundation Design and Practice: An Economic View, J. H. Thornley, (Review, 143)
for Roll Grinding Machines, P. H. Allaway, 457
Foundry, Mechanised, Qualcast, Ltd., 640
West Country, Stenners of Tiverton, Ltd., 214
Four-Stroke Diesel Engine, 269 c.c. Air-Cooled, Villiers Engineering Company, Ltd., 799
Frame Grid Valve Manufacture, Mullard, Ltd., 638

Frames, Statically-Indeterminate, Contribution of Navier and Clebsch to the Theory of, T. M. Charlton, 712
Frameless Tipping Trailer, Anthony Company, 808
Free Piston Engine, Note on Indicating, G. Walker, 883
Freighting, Light Aircraft for, Short Brothers and Harland Limited, 399
French Nuclear Developments, Commissariat à l'Energie Atomique, 853
Frequency Checking Equipment, Microwave, Standard Telephones and Cables, Ltd., 1114
Converters, Alternating Current, (Patent, 485)
Meters, Electrical, (Patent, 1073)
Modulated Oscillator, (Patent, 298)
Friction Brake, Hydraulically-Driven Motor with, (Patent, 1122)
Prop Wedge Release Mechanism, telescopic, National Coal Board Central Engineering Establishment, 113
Fuel Cell Generators, Westinghouse Electric Corporation, 84
Cells, (Patent, 521)
Efficiency Progress Survey, National Industrial Fuel Efficiency Service, (Leading Article, 616)
Element Components, Magnesium Alloys for, Nuclear Energy Committee, Institute of Metals, 583
Elements, Nuclear Reactor, Thermal Cycling Rigs for, J. R. Linge, 1093
Elements for Nuclear Reactors, (Patent, 486)
Oil Combustion Research, Experimental Boiler for, K. J. MacKenzie, W. O. A. Morton, G. F. J. Murray and W. V. P. Ferguson, 548
Oil, Heavy, Burning of, Urquhart's (1926). Ltd., 1025
Oil Injection in Blast-Furnaces, Société des Acieries de Pompey, 909
Processing Plant, Inauguration of Mol Nuclear, 162
Fulham, Ready-Mixed Concrete Plant at, Greenham Ready Mixed Concrete, Ltd., 40
Fume and Dust Emissions, Stopping, (Leading Article, 49)
Fundamentals of Rocket Propulsion, R. E. Wiech, jr., and R. F. Strauss, (Review, 1053)
Furnaces, Aluminium Melting, Morgan Crucible Company, Ltd., 1026
Electric, (Patent, 48)
Electric Induction, (Patent, 997)
Rotary, for Treating Molten Metal, Protecting the Lining of, (Patent, 414)
Quench, Small Closed, Electric Resistance Furnace Company, Ltd., 20, 811
Rotary Hearth, Billet Handling Equipment for, Hymatic Engineering Company, 945
Slug Heating, Royce Electric Furnaces Ltd., 440
Shaft, (Patent, 47)
Shaft, Charging Devices for, (Patent, 333)
Fuse, Explosion, Calor-Emag, 992
Switch, Expulsion, Certified for 150 MVA at 11kV, Johnson and Phillips, Ltd., 157
Fuses and Heavy-Duty Composite Units of Air-Break Switches, 109
Fusion Research, Programme, Broadening the, United Kingdom Atomic Energy Authority, (Leading Article, 577)
Future Techniques in Computing, Elliott Brothers (London) Ltd., 394

G

G.E.C. and English Electric, 566, 949
Gallium Arsenide Diodes, Bell Telephone Laboratories, 412
Phosphide Single Crystals, Bell Telephone Laboratories, 955
Gamma Dosimeter, a Sensitive Direct-Reading Pocket-Size, J. H. Howes, (Report, 213)
Irradiation, Rig for Testing Lubricants Under, Mobil Oil Company, 639
Radiation, Detection by Induced Conductivity, C. G. Clayton, 280
Ray Absorption, Continuous Measurement of Density by Means of, Allgemeine Elektricitäts-Gesellschaft, 773
Gas Alloying and Annealing, Open Coil Processes of, Lee Wilson Engineering Company, 611, 650
Compatible Meter Diaphragms, 107
Control, Sealing Valves for, (Patent, 613)
Cooled Reactor, Advanced, at Windscale, 160
Cooled Nuclear Reactors, (Patent, 413)
Council, 644
Engines, Lenoir's, New Motive Power, 1860, 697
for Engines, Liquefied Petroleum, Calor Gas (Distributing) Company, Ltd., 565
Explosions in Mines, (Leading Article, 453)
Industry, 1960, Register of the, (Review, 315)
Fired Mastic Asphalt Transporter, Braham, Patterson and Benham, Ltd., 799
Plant and Protection of Equipment from Corrosion, Corrosion Group of the Society of Chemical Industry, 670
Plant, Symposium on the Protection of, Institution of Gas Engineers, 364
Supply for Whitby, Natural, North Eastern Gas Board, 552

GAS TURBINES

Air Bleed Turbines, Auto Diesels Ltd., 409
Automatische Regelung von Dampferzeugern, Dampf-und Gasturbinen, (Report, 1058)
Gas-Turbine Engines, (Patent, 167)
Turbines to Burn Wood Waste, J. L. Harrison-Smith, (Letter, 714)
Turbines in Japan, Boeing Airplane Company, 572
Gasturbinen—Arbeitsweise, Gestaltung und Anwendung, K. Leist, (Review, 315)
Introduction to the Gas Turbine, D. G. Shepherd, (Review, 801)
Large Lightweight Gas Turbine, Perkins Gas Turbines, Ltd., 950
Thermal Fatigue Investigations, M. Cox and E. Glenny, 346
Turbine Engine Handling System, Air Logistics Corporation, 766
Manufacturing Works, Hawker Siddeley Brush Turbines, Ltd., 986
Gases Coal Distillation, Purifying, (Patent, 297)
in Metals, Symposium on the Determination of, 237
Gate, Automatic, Car Park, Parking Corporation of America, 1023
Gauge, "Helicoid", British Wire Products, Ltd., 720
Torque, Slipring-Free, ASEA, 993
Gauging of Cam Profiles, (Patent, 1037)
Gear Deburring Machine, Burrows and Smith, Ltd., 1063
Grinding Machine, Gear Grinding Company, Ltd., 19
Hobbing Machine, "OFP 20", 688
Hobbing Machine, Vertical Heavy Duty, Lees-Bradner Co., Cleveland, Ohio, 777
Shaving Machine, Universal, Semi-Automatic, Churchill Gear Machines, Ltd., 54
Teeth, Automatic Grinding Machine for, Michigan Tool Company, 46
Units, Worm, David Brown Industries, Ltd., 602
Gearbox Six-Speed in Overdrive Form, David Brown Industries, Ltd., 597
Three-Speed "Hydramatic", 673
Geared Starter Motor, Siba Electric, Ltd., 844
Steam Locomotive, "Shay", 1879-1945, R. A. S. Abbott, 1041
Gearing, International Conference on, 445
General Electric Strike, 953
Generating Units for Drakelow-C Power Station, Supercritical, Central Electricity Generating Board, 313
Generation, Electric Power, New Methods of, Westinghouse Electric Corporation, 84
of Electric Power, Some Notes on the Possible Application of Thermo-Electric Devices to the, (Report, 759)
Electric Power, New Methods of, Westinghouse Electric Corporation, 123
Thermionic, Westinghouse Electric Corporation, 86
Thermoelectric, Westinghouse Electric Corporation, 85
Generators, Control Panel for, Mains-Failure, Southern Instruments, Ltd., 943
Set, 200A Welding, Lincoln Electric Company, Ltd., 37
Waveform Test, Feedback Ltd., 321
Fuel Cell, Westinghouse Electric Corporation, 84
Magnetohydrodynamic, Westinghouse Electric Corporation, 123
German Railways, 125th Anniversary of, 1117
Economy, a Maior Drag on the, (Leading Article, 1001)
Geological Succession, Occurrence of Sulphates in the, E. M. Hughes, 660
Germanium and Silicon Power Rectifiers, J. C. Read, 533; D. R. Coleman, (Letter, 838); D. B. Corbyn, (Letter, 669)
Germany, Effluent Purification in, 81
Girders with Slender Webs, Tests on, 6
Welded, Bridge, Stress Relieving Large, Fairfield Shipbuilding and Engineering Company Ltd., 201
Glasgow, Back to Steam in, (Leading Article, 1040)
Suburban Railway Electrification, 763
Glass Industry, Pilkington Brothers and the, T. C. Barker, (Review, 353)
Level Control, Forster's Glass Company, Ltd., 1082
"Gleep" Research, Reactor at Harwell, Modifications to, United Kingdom Atomic Energy Authority, 247
Glen Canyon Bridge, 5
Nevis Hydro-Electric Scheme, North of Scotland Hydro-Electric Board, 641
Glide Path Indicator, Visual, General Electric Company, Ltd., 456
Gloves, Industrial Protective, (B.S.I., 48)
Rubber, for Electrical Purposes, (B.S.I., 48)
Godorf Refinery Opened, Deutsche Shell A.G., 517
Gold Plating Process, Ultrasonics in, Dawe Instruments, Ltd., 1063
Government Service, Recruitment of Scientists and Engineers to, Civil Service Commissioners, (Leading Article, 616)
Governing of Petrol Engines, Investigation of Cut-Off and Throttle, Mahmoud Hassaan Saadawi, 1083
Graduates, Home, Overseas Better Trained than?, (Leading Article, 783)
Section Venture, Successful, Institution of Mechanical Engineers, 680
Training of Home, (Leading Article, 784)
Grain Dryer, Gravity Flow, Ransomes, Sims and Jefferies, Ltd., 971
Grande Dixence Scheme, 951
Grandstand, Aluminium Roof for Stadium, 254
Grants for Space Research, Department of Scientific and Industrial Research, 279
Graphite Cartridge Condensers, Powell Duffryn Carbon Products Limited, 365
Exporting Knowledge about, The General Electric Company, Ltd., 725
Gravity Flow Grain Dryer, Ransomes, Sims and Jefferies, Ltd., 971
Greases, (Patent, 1037)
Calcium-Base, (B.S.I., 88)
Great Britain, Oil Consumption in, Petroleum Information Bureau, 440
Saint Bernhard Road Tunnel, 775
Greece, Crib Revolutionary in, (Leading Article, 657)
Grinder, Automatic Internal, Rockwell Machine Tool Company, Ltd., 17
Facing and Internal, Maschinenfabrik Spandau, 649
Surface, High Production, Thompson Grinder Co., 777
Surface, Rotary Table, Selson Machine Tool Company Ltd., 14
Grinding Machine, Centreless, Arthur Scrivener, Ltd., 55
Machine, Cylindrical, Cincinnati Milling Machine Company, Grinding Machine Division, 858
Machine, Gear, Gear Grinding Company, Ltd., 19
Machine for Gear Teeth, Automatic, Michigan Tool Company, 46
Machine, Miniature Ball Bearing Race, Van Norman Machine Company, 911
Machine, Multi-Form, The Sheffield Corporation, 858
Machine, Precision Cylindrical, Coventry Gauge and Tool Company, 322
Machine, Vertical Spindle, Mattison Machine Works, 475
Machines, Foundation for Roll, P. H. Allaway, 457
Machines, "Matrix", Coventry Gauge and Tool Company, Ltd., 9
Machines, Precision, Matchless Machines, Ltd., 56
Mills, Ball-Bearing, (Patent, 1121)
Groove Piston-Ring, Reducing, Wear, (Patent, 167)
Ground Effect Machine, Annular Jet, Britten-Norman, Ltd., 34
Effect Research, Folland Aircraft, Ltd., 987
Grout, Chemical, Cyanamid of Great Britain, Ltd., 38
Guns, Spot Welding, Portable Welders, Ltd., 811
Electron, (Patent, 127)
Gzowski, Sir Casimir Stanislaus: A Biography, Ludwik Kos-Rabcewicz-Zubkowski and William Edward Greening, (Review, 194)

H

H.F. Induction Heaters, Research and Control Instruments Ltd., 473
"Haines" Improved Leather Driving Strap, 1860, 745
Halden Reactor, Project, Prolongation of, 610
Hamburg, British Ford Convention in, 854
Hammermill, Double Rotor, General Electric Company, Ltd., 798
Handbuch der Kaltetechnik, 3 Band, R. Plank, H. D. Baehr and E. Hofmann, (Review, 759)
Handling System, Turbine Engine, Air Logistics Corporation, 766
Handpiece, Safety Shower, Siemens-Electrogeräte A.G., 517
Hand-Setting Hose Clip, Lightning Time Savers, Ltd., 78
Hanover Machine Tool Exhibition, 568, 608, 649
Harbours and Coastlines, South African Research into, 254
Hard Chrome Plating of Cylinder Liners, Laystall Cromard, Ltd., 604
Harlow Town Station, British Railways, 155
Harmonic Analysis of Nuclear Reactor Flux Noise, Record Replay System for, J. A. J. Lawrence and E. R. Curran, (Report, 70)
Harvester, Beet, Stanhay (Ashford), Ltd., 971
Combine, Massey-Ferguson, Ltd., 971
Combine, Self-Propelled, International Harvester Company of Great Britain Ltd., 971
Harwell, Formation of Solid State Physics Division at, Atomic Energy Research Establishment, 562
Hastings, Low-Power Television Station at, 1107
"H"-Beams, Composite Construction using High-Tensile Steel, Boulton and Paul, Ltd., 944
Health Bill, Public, 851
and the Engineer, (Leading Article, 452)
Industrial, Nuffield Foundation, (Leading Article, 265)
Heat Exchange Unit, Crane Packing, Ltd., 215
Pump, Domestic, Jonmil Building Developments, Ltd., 902
Pump, Works, Davey, Paxman and Co. Ltd., 250
Treatment Congress, 409
Treatment of Metal Parts, (Patent, 377)
Heaters, H.F. Induction, Research and Control Instruments Ltd., 473
Storage, Thermostatic Control of Electric, (Patent, 297)
Vapour-Cooled Valves for Industrial, Radio Heaters, Ltd., 946
Heating, Air Conditioning and Refrigeration Equipment, Chrysler International, S.A., 245
Apparatus, Dielectric, (Patent, 261)
Induction, Basics of, Chester A. Tudbury, (Review, 839)
Jackets, Industrial, Simon Handling Engineers Ltd., 441
of Power Station Buildings, Central Electricity Generating Board, 433
and Ventilating Industry, Year Book of the, (Review, 393)
Heavy Drifter, Holman Brothers, Ltd., 798
Duty Vertical-Production Milling Machine, Midgley and Sutcliffe, Ltd., 14
Electric Equipment, Manufacture of, Associated Electrical Industries Ltd., 288
Engineering, High Productivity in, A. G. Thompson, (Review, 428)
Fuel Oil, Burning of, Urquhart's (1926), Ltd., 1025
Vehicle Innovations, Scammell Lorries Ltd., 468
Vehicle Refinement, Leyland Motors Ltd., 435
"Hector" Research Reactor, Atomic Energy Establishment Winfrith, 472
"Helicoid" Gauge, British Wire Products, Ltd., 720
Helicoidal Sheds, High Voltage Insulators with, 161
Hereford, Butane/Air Plant at, W. C. Holmes and Co., Ltd., 981
High Angle Belt Conveyor, Richard Sutcliffe, Ltd., 474
Lift Device, the Rotating Flap as a, (Report, 8)
Pressure Diaphragm-Operated Valves, British Arca Regulators, Ltd., 440
Pressure, Ducting, Expansion Joint for, Richardsons Westgarth & Co. Ltd., 400
Pressure, Compact Apparatus for Generating, National Bureau of Standards, 294
Precision Finishing Operation, Transfer Machines for, Cross Company, 219
Speed Coal Shipping, Mitchell Engineering, Ltd., 402
Speed Diesel Engine, Small, Villiers Engineering Company, 641
Speed Wind Tunnels, English Electric Aviation, Ltd., 676
Temperature Reactor, "Dragon", O.E.E.C. High-Temperature Reactor Project, 302, 338
Temperature Reactors, Resonance Integral Calculations for, J. P. H. Blake, (Report, 213)
Tensile Steel "H"-Beams, Composite Construction, Boulton and Paul, Ltd., 944
Tensile Rubber, Seating Platform in, Vitafoam, Ltd., 597
Voltage Insulators with Helicoidal Sheds, 161
Voltage Resistors, Welwyn Electric, Ltd., 767
Voltage Transformer, 375/MVA, ASEA, 217
Highgate Wood, Experimental Electronic Telephone Exchange System, 938
Hitch, Tractor, Massey-Ferguson, Ltd., 474
Hobbing Machine, Gear OFP 20, 688
Machine Gear Vertical Heavy-Duty, Lees-Bradner Co., 777
Hochtemperaturbeständiger Werkstoffe, Eigenschaften und Verwendung, G. Bayer, (Report, 1022)
Hoddesdon, Pharmaceutical Plant at, Merck, Sharp and Dohme, Ltd., 152
Hoist Crab, Lauf-Bungert and Winnesberg, K.G., 83
Lightweight, Haltract, Ltd., 78
Motorised, Newman Industries, Ltd., 22
Hollow Bodies, Bores of, (Patent, 167)
Holy Loch Base, (Leading Article, 784)
Honing Equipments, Induction Heating and, Delapena and Son, Ltd., 59
Machine, Single-Spindle, Barnes Drill Company, 914
Machines, Automatic Transfer Installation of Four, Micromatic Hone Corporation, 911
Hopper, Vibratory, W. R. Hamilton (Plymouth) Ltd., 154
Horizontal All-Steel Section Rolling Machine, F. J. Edwards, Ltd., 59
Borine, Drilling and Milling Machine, Giddings and Lewis Machine Tool Company, 860
Boring Machine, Selson Machine Tool Company Ltd., 14
Boring Machines, Optical Depth Control for, H. W. Kearns and Co. Ltd., 765
Boring and Milling Machine, DeVlieg Machine Company, 914
Contour Milling Machine, Giddings and Lewis Machine Tool Company, 859
Co-Ordinate Drilling Machine, James Archdale and Co. Ltd., 54
Hose Clip, Hand-Setting, Lightning Time Savers, Ltd., 77
Flexible, Hydraulic, I.C.I. Terylene, 215
Hot Shaping of Metals and Metal Alloys, (Patent, 334)
Hours, Coal Mining, 159
of Work and Wages, 159
and Wages, Ministry of Labour, 286, 404
Hover Scooter, Rhoades Incorporated, 842
Hubs, Motor Car Wheel, Transfer Machine for, 1036
Hull, Large Moulded Resin-Glass, Halmatic Ltd., 363
Humidity-Measuring Instrument, Standard, Based on the Principle of Adiabatic Saturation, 1030
Hunterston Nuclear Power Station, Progress at, 246
Nuclear Power Station, Progress on, Simon-Carves Atomic Energy Group, 555
"Hydrahed", Kennett Handling Equipment, Ltd., 72
Hydraulic "Barnes" Press, Downstroking, George Cohen, Sons and Co. Ltd., 13
Drive for Mine Conveyors, Richard Sutcliffe, Ltd., 944
Excavator, J. C. Bamford (Excavators) Ltd., 797
Excavator and Shovel, Whitlock Bros., Ltd., 508
Hose, Flexible, I.C.I. Terylene, 215
Pit Props for Temporary Floor Strengthening, Dowty Mining Equipment, Ltd., 1113
Press Brake, 24ft long, Cincinnati Shaper Co., Cincinnati, 778
Presses, Rhodes, Gill & Co., Ltd., 212
Servo, Air Powered, Clayton Dewandre Company, Ltd., 209
Thrust Boring Machine, E. Pass & Co. Ltd., 321
Turbines, (Patent, 168)
Hydraulically Driven Automatic Oscillating Device, Hydraulic Machinery Drives Ltd., 321
Driven Motor with Friction Brake, (Patent, 1121)
Hydraulics Research, 1959, Hydraulics Research Board, 247
Hydrodynamic Drag of a Shallowly Pitted Surface, J. R. D. Francis, 532

HYDRO-ELECTRIC

Aswan High Dam, A. Aziz Ahmed, (Letter, 1052)
Glen Nevis Hydro-Electric Scheme, North of Scotland Hydro-Electric Board, 641
Grande Dixence Scheme, 951
Hydro-Electric Schemes in Kerala, India, 1069
Iron Gate Project, 445
Malpasset Dam, W. R. Mitchell, (Letter, 503)
Prestressed Arch Dam, Toutemagne, 4
Rance Tidal Power Project, J. H. M. Sykes, 689
Snowy Mountains Scheme, 388
Two Aswan Schemes, Institution of Civil Engineers, 919
Umiam Hydro-Electric Project, Assam, 991
Vianden Pumped Storage Scheme, 326

Hydrofoil Boat for Stockholm-Mariehamn Service, Cantiere Navale Leopoldo Rodriquez, 993
Hydrokinetic Retarder Installation, Automotive Products Company, Ltd., 598
Hydro-Pneumatic Shock, (Patent, 222)
Hydrostatic Pressure, the Behaviour of Metals under High, H. Ll. Pugh and D. Green, 280
Transmission Acting as a Clutch Tolerating Indefinite Slip, A. B. Asbrink and Co., 599
Hygiene Service, Slough, Occupational, Slough Industrial Health Service, 473

I

I.C.O.S. Veder Process, 698
Identification of Pipelines, (B.S.I., 1050)
Ignition Switch, Piezoelectric, Trojan, Ltd., 973
System, "Energy Transfer", Joseph Lucas, Ltd., 843
Torch, Spark, Calor Gas (Distributing) Company, Ltd., 726
Frame for Locomotives, Water-Cooled, The English Electric Company, Ltd., 591
Ilmac Congress and Exhibition, Second, 217
Immersion Refractometer, Carl Zeiss, 480
Impact Wrench, Torque Controlled, Consolidated Pneumatic Tool Company Ltd., 460
Import and Export Prices, Board of Trade, 286
Trade, Australia's, 476
Improvement Scheme, Park Lane, Progress of the, 698; R. Edmonds, (Letter, 838)
Independent Sideband Transmission, Redifon, Ltd., 110
Indexing Fixture, Standard, Delapena and Son, Ltd., 59

INDIAN ENGINEERING NEWS

India's Third Five Year Plan, 288
Electrical Plant Manufacture in India, (Leading Article, 825)
First Decade of India's Planned Economy, 288
Opening of New Factory by Mr. Nehru, Heavy Electricals, Ltd., 845
Hydro-Electric Schemes in Kerala, India, 1069
Indus Waters Treaty, 990
Machine Tool Production, Hindustan Machine Tools (H.M.T.), 288
Manufacture of Heavy Electric Equipment, Associated Electrical Industries, Ltd., 288
Research and Isotopes Production Reactor Goes Critical, 288

Indicating Instruments Having Warning Lights, (Patent, 221)
the Free Piston Engine, Note on, G. Walker, 883
Indication and Control, Level, Thomas Industrial Automation, Ltd., 1023
Indicators, Crash Position, (Patent, 861)
Mechanical Torque, Sir George Godfrey and Partners (Industrial), Ltd., 1024
Angle of Approach, (Patent, 741)
Individual Base Circle Involute Measuring Machine, Gear Grinding Company, Ltd., 18
Induced Conductivity, Detection of Gamma Radiation by, C. G. Clayton, 280
Inductance Coil, (Patent, 414)
Induction Furnaces, Electric, (Patent, 997)
Heaters, H.F., Research and Control Instruments Ltd., 473
Heating, Basics of, Chester A. Tudbury, (Review, 839)
Heating and Honing Equipments, Delapena and Son, Ltd., 59
Motors, Improvements in, (Patent, 485)
Indus Catchment, Air Surveys in, Hunting Surveys, Ltd., 508
Waters Treaty, 990
Industrial Accidents, Engineers and, A. A. Beckingsale, 459
Archaeology, Anglo-American Summer School on, University of Manchester Extra-Mural (Extension) Department, 941
Building, Board of Trade, 605
Films, Federation of Civil Engineering Contractors, 1027
Growth, 79
Heaters, Vapour-Cooled Valves for, Radio Heaters, Ltd., 946
Heating Jackets, Simon Handling Engineers Ltd., 441
Relations, (Leading Article, 525)
Relations, National Union of Manufacturers, 566
Relations and the T.U.C., Trades Union Congress, 367
and Research Polarograph, Evershed and Vignoles, Ltd., 848
Shunter, Diesel-Hydraulic, Ruston and Hornsby, Ltd., 211
Telemetry, J. E. Dick, 745
Tips and Water Pollution, 502
Trends, Federation of British Industries, 685
Turntable in Paper Mill, J. W. Marshall & Co. Ltd. and Bolton Turntable Company, 365
Vacuum Plant, Symposium on Experience of Large Scale, Institution of Mechanical Engineers, 906
Value of D.S.I.R. Research, Water Pollution Research Laboratory, 892, 922; G. F. Arkless, (Letter, 466)
Industry, Controls for, Lord Citrine, 685
or Landscape?, (Leading Article, 863)
Relocation of, City Council of Birmingham, 685
in Scotland, Rootes Motors, Ltd., 605
and Social Responsibility, 812
Inert Atmosphere Processing Facility for Refractory Metals, Universal-Cyclops Steel Corporation, 410
Information Display, Pilot's, Royal Aircraft Establishment, 1062
Infusion Equipment, Water, Richard Sutcliffe, Ltd., 731
Ingot Buggy and Shuttle Car Scheme, R. B. Larkinson, 231
Casting Machines, (Patent, 957)
Inhibitor, Detonation, Volatile, Socony Mobile Oil Company, 46
Injection, Fuel Oil, in Blast-Furnaces, Société des Acieries de Pompey, 909
Manifold, System, Pump of the "Simms", Coventry Climax Engines, Ltd., 721
Moulding Apparatus, (Patent, 485)
System, Manifold, Simms Motor Units, Ltd., 721
Inspection Machine, Co-Ordinate, Ferranti, Ltd., 21
of Pressure Plant for Land-Based Nuclear Installations, Lloyd's Register of Shipping, 903
Radiographic, Powerful Linear Accelerator for, A. O. Smith Corporation, 1072
Inspector's Report, Factory, 476
Institution Headquarters, Institute of Road Transport Engineers, 1060
Merger, Voting for, Institution of Civil Engineers and Institution of Municipal Engineers, (Leading Article, 655)
of Naval Architects, 1860-1960, K. C. B. Barnaby, (Review, 758)
Instrument Landing System at London Airport, New, Standard Telephones and Cables Ltd., 209
for Measuring Very Small Bores, P. W. Harrison and G. M. Severn, 467
Instrumentation and Automation, Congress and Exhibition for, Interkama, 771
Instruments, Electronic, for the Automatic Evaluation of Recordings, 772
and Measurements Conference and Exhibition, 217
for Measuring the Air Content of Oil, A. T. J. Hayward, (Report, 1058)
Insulation, Sound, and Noise Reduction, (B.S.I., 1050)
Insulators, Cylindrical Post, (Patent, 821)
High-Voltage, with Helicoidal Sheds, 161
Integrator for Chart Recorders, Honeywell Controls Ltd., 323
Interkama, Congress and Exhibition for Instrumentation and Automation, 771
Intermetallic Compounds, Mechanical Properties of, J. H. Westbrook, (Review, 801)

INTERNAL COMBUSTION ENGINES

Air-Cooled 269 c.c., Four-Stroke Diesel Engine, Villiers Engineering Company, Ltd., 799
Burning of Heavy Fuel Oil, Urquhart's (1926), Ltd., 1025
Doxford "P" Range of Engines, William Doxford and Sons (Engineers) Ltd., 31
5¼in by 6in Diesel Engines of Cummins and Rolls-Royce, 837
Hollow Cast Crankshafts with Lubrication Tubes, (Patent, 653)
Investigation of Cut-Off and Throttle Governing of Petrol Engines, Mahmoud Hassaan Saadawi, 1083
Large Bore Marine Diesel Engine, Sulzer Brothers, Ltd., 1077
Latent Heat Cooling and Waste Heat Recovery in Diesel Engines, Diesel Engineers and Users Association, (Leading Article, 824)
Manifold Injection System, Simms Motor Units, Ltd., 721
Marine Diesel Engine 25,000 b.h.p., A/S Burmeister and Wain, 1032
New Aero Engines, Bristol Siddeley Engines, Ltd., 278
Motive Power—Lenoir's Gas Engines, 1860, 697
Note on Indicating the Free Piston Engine, G. Walker, 883
Oil Engine Maintenance, (Leading Article, 2)
Piezoelectric Ignition Switch, Trojan, Ltd., 973
Piston and Piston-Ring Assemblies, (Patent, 917)
Pump of the "Simms" Manifold Injection System, Coventry Climax Engines, Ltd., 721
Reducing Piston-Ring Groove Wear, (Patent, 167)
Running-In of Internal Combustion Engines, (Patent, 298)
"Six 354" Direct Injection Diesel Engine Perkins Engines, Ltd., 836
Small High-Speed Diesel Engine, Villiers Engineering Company, Ltd., 641
Temperature Measurements in a Doxford Cylinder Liner, B. W. Millington, 871
Two New Engines, Coventry Climax Engines, Ltd., 721
Stroke Internal Combustion Engines, (Patent, 614)
Volatile Detonation Inhibitor, Socony Mobile Oil Company, 46

Internal and Facing Grinder, Maschinenfabrik Spandau, 649
Grinder, Automatic, Rockwell Machine Tool Company, Ltd., 17
International Astronautical Congress, Eleventh, Svenska Interplanetariska Sallskapet, 382
Boat Show, Ship and Boat Builders' National Federation, 1059
Conference on Gearing, 445
Conference on Operation Research, Second, International Federation of Operational Research Societies, 648
Conferences, Disturbing Trends at, (Leading Article, 50)
Film Festival, 444
Scientific Radio Union (U.R.S.I.) Meeting in London, 438
Interplanetary Probes, Solar-Powered, Northrop International, 484
Introduction to the Gas Turbine, D. G. Shepherd, (Review, 801)
Invoice and Recording System, Shell-Mex and B.P. Ltd., 674
Iranian Oil Production in 1959, 565
Iraq, Oil Production in, Iraq, Basrah and Mosul Petroleum Companies Ltd., 402
Ireland, "Mechanicals" in, Institution of Mechanical Engineers, (Leading Article, 1)
Iron Gate Project, 445

IRON AND STEEL

Australia's Secondary Industries, Broken Hill Pty., Ltd., 702
Automation in the Steel Industry, British Iron and Steel Research Association, (Leading Article, 696)
Caracteristiques des Aciers, (Review, 669)
Careers in Iron and Steel, 214
Dangerous Brittleness in Steel, (Leading Article, 1000)
De-Nationalisation of Steel, Iron and Steel Holding and Realisation Agency, 1066
Direct Reduction of Iron Ore, Head Wrightson and Co. Ltd., 156
Dorman Long Development Programme, 733
Drilling Cast Iron, Production Engineering Research Association, 625
Electroplated Coatings of Cadmium and Zinc on Iron and Steel, (B.S.I., 791)
Fuel Oil Injection in Blast-Furnaces, Société des Acieries de Pompey, 909
Ingot Buggy and Shuttle Car Scheme, R. B. Larkinson, 231
Iron Castings, Joint Iron Council, 404, 949
Ore Sintering Machine, 162
and Steel, 159, 324, 512, 851, 1066
and Steel Report, Iron and Steel Board, (Leading Article, 1)
Low-Load Blast-Furnace for Iron Smelting, (Patent, 1073)
Martensitic Stainless Steels, (Patent, 48)
Mechanised Foundry, Qualcast, Ltd., 640
Oxidation of Steel by Carbon Dioxide, Society of Chemical Industry, Corrosion Group, 27
Pneumoconiosis Survey, Council of Iron-foundry Associations, 159
Procedures for Obtaining Properties of Steel at Elevated Temperatures, (B.S.I., 298)
Rotary Compressors, (Patent, 413)
Shaft Furnaces, (Patent, 47)
Ship's Steel, Lloyd's Register of Shipping, 275
Steel Firm's New Headquarters, United Steel Companies Ltd., 252
Industry Expenditure, British Iron and Steel Federation, 324
Plant Expansion, Dorman Long (Steel), Ltd., 115
Sheets with All-Over Plastics Coating, Dorman Long and Co., Ltd., 984
Works, New, Park Gate Iron and Steel Company, Ltd., 770
Stress Relieving Large Welded Bridge Girders, Fairfield Shipbuilding and Engineering Company, Ltd., 201
Thermochemistry for Steelmaking, John F. Elliott and Molly Gleiser, (Review, 631)
Ultra High Strength Steels, Samuel Fox & Co. Ltd., 238
West Country Foundry, Stenners of Tiverton, Ltd., 214
Workington Sinter Plant, Workington Iron and Steelworks, 1020

Irrigation Pump, Tractor-Driven, Arthur Lyon and Co. (Engineers), Ltd., 972
Isolator, Installation, Rotary, Hackbridge and Hewittic Electric Company, Ltd., 560
Ironclads, Last of the, Lancashire and Yorkshire Railways, 509
Isotopes Production and Research Reactor Goes Critical, 288
Radioactive, from C.E.G.B. Reactors?, Electricity (Amendment) Bill, (Leading Article, 823)
Italian Liners, Laying of Keels, Societa per Azioni Ansaldo, 569

J

Jackets, Industrial Heating, Simon Handling Engineers Ltd., 441
Japan, Gas Turbines in, Boeing Airplane Company, 572
Jet Flame Drilling and Working of Stone, Union Carbide Europa, S.A., 162
V.T.O.L. Flat-Rising, Hawker P. 1127, 943
Jetty, Launch, Milford Haven, 363
Jig Borer, Wickman, Ltd., 60
Borer with Optical Measuring System, Stedall Machine Tool Company, Ltd., 57
Drill, for Cylindrical Work, Revel Engineering Company, Ltd., 810
for Domestic Switches, Automatic Testing, The General Electric Company Limited, 471
Joint for High-Pressure Ducting, Expansion, Richardsons Westgarth & Co. Ltd., 400
Meetings on Applications of Electricity in Aircraft, Institution of Electrical Engineers and Royal Aeronautical Society, 765
Negotiation, Ministry of Labour, 907
Joints, Eccentrically loaded Riveted, Tests on, A. J. Francis and G. L. Belcher, 177
Expansion, for Bridge and Like Roadways, (Patent, 377)
Pipe, Threaded, Sealing Tape for, William Rose, Ltd., 982
Structural, Internal Damping Due to, and Techniques for General Damping Measurement, D. J. Mead, (Report, 8)
between Tubes of Dissimilar Materials, (Patent, 167)
Jubilee, Star Aluminium Company, Ltd., 1028

K

Karlsruhe Nuclear Research Centre, 369
Second Reactor for, 951
Keels of Italian Liners, Laying of, Societa per Azioni Ansaldo, 569
Kent Coast Electric Services, 1114
Coast, Electrification, Widening for, British Railways, Southern Region, 63
Kerala, India, Hydro-Electric Schemes in, 1069
Kincardine Power Station, South of Scotland Electricity Board, 618
Kinetic Experiment on Water Boilers, Atomics International, 571
King Street Bridge, Melbourne, Utah Australia, Ltd., 514
Kitts Green, Equipment for Aluminium Works at, James Booth Aluminium, Ltd., 39
Klystron, High-Power C.W., English Electric Valve Company, Ltd., 1061
Korneuburg Power Station, 815
Korrosion and Oberflächenschutz-III, (Report, 1022)

L

Laboratories in Maryland, Construction of New N.B.S., 691
Laboratory at Egham, Combustion, Shell Central Laboratory, 658
Equipment, Fluid Mechanics, J. A. Sandover, 227

LABOUR MATTERS

Annual Conference, Institute of Personnel Management, 644
Apprentices' Wages, 214
Apprenticeship Schemes, Pirelli, Ltd., 115
Coal Mining Hours, 159
Employment, Ministry of Labour, 115, 286, 476, 812, 1027
Engineering and Shipbuilding Wages, Confederation of Shipbuilding and Engineering Unions, 42, 605, 1114
Wages, Engineering and Allied Employers' National Federation, 949
General Electric Strike, The, 953
Industrial Relations, (Leading Article, 525)
Relations, National Union of Manufacturers, 566
Relations and the T.U.C., Trades Union Congress, 367
Joint Negotiation, Ministry of Labour, 907
Miners' Wages, National Coal Board, 286
Ninety-Second T.U.C., Trades Union Congress, 404
Pneumoconiosis Survey, Council of Iron-foundry Associations, 159
Presidential Address, Trades Union Congress, 442
Railway Pay Agreement, 324
Shopmen's Pay Claim, 566, 605, 644
Wages, 42
Recruitment and Training, Federation of British Industries, 367
Remuneration of Engineers, Engineers' Guild, (Leading Article, 960)
Shipbuilding Wages, Shipbuilding Employers' Federation, 949
Tally Clerks' Strike, Minister of Labour, 949
Unemployment, Ministry of Labour, 42, 241, 442, 605, 769, 988
Wages and Hours, Ministry of Labour, 286, 1404
and Hours of Work, 159
and Industrial Relations, Edgar Allen & Co. Ltd., 286
Workshops for the Blind, Ministry of Labour, 79
Youth Employment and Further Education, Crowther Report, 159

"Ladder" Drilling for Rock Tunnelling, Atlas Copco, Ltd., 947
Lake Project, Canberra, 1068
Lakes, Polluted, New Life for, Industriforbundets Vattenvardsbyra, 372
Laminarised Aircraft, Northrop Corporation, 572
Laminate Wood Supports in a V.L.F. Radio Transmitter, Permali, Ltd., 681

Lamps, Discharge, Low Pressure Electric, (Patent, 997)
for General Purposes, Electric Discharge, 109
Land Drainage and Water Supply, (Leading Article, 863)
Landscape or Industry?, (Leading Article, 863)
Language Analysis, Applied, and Machine Translation of Languages, International Conference on, (1116)
Laplace Transforms for Radio and Electronic Engineers, Introduction to, W. D. Day, (Review, 839)
Large Scale Industrial Vacuum Plant, Symposium on Experience of, Institution of Mechanical Engineers, 906
Last of the Few, Bristol "Britannia", (Leading Article, 785)
Latent Heat Cooling and Waste Heat Recovery in Diesel Engines, Diesel Engineers and Users Association, (Leading Article, 824)
Lathes, Automatic Flow-Forming and Spinning, Leifeld and Co., 609
Automatic Turret Chucking, Gisholt Machine Company, 780
Auto-Tracer, with Automatic Cycle Drum Control, Jones and Lamson Machine Company, 855
Capstan, "2 D", Alfred Herbert, Ltd., 10
Centre, "Dynashift", Monarch Machine Tool Company, 820
Centre, 20in. Swing, R. K. LeBlond Machine Tool Company, 819
Copy Turning, B.S.A. Tools, Ltd., 61
Facing Copy, Sykes Machine Tool Company, Ltd., 12
Heavy-Duty Chucking Automatic, Acbars, Ltd., 19
Heavy Trepanning and Re-Boring, Wagner and Co., 609
Heavy Duty, Crankshaft Turning, Henry Broadbent, Ltd., 249
High Speed Production, Soag Machine Tools, Ltd., 20
Large Unit-Construction, Craven Brothers (Manchester), Ltd., 809
Model 44LR, Sykes Machine Tool Company, Ltd., 12
with Multi-Cut Cycling, Production, Monarch Machine Tool Company, 296
Railway Wheel, Craven Brothers (Manchester), Ltd., 906
36in Swing Gap Bed, Crawthorne Engineering Company, Ltd., 58
Toolroom, Woodhouse and Mitchell, Ltd., 62
Turret, Automatic, Gisholt Machine Company, 779
Turret, Automatic, Warner and Swasey Company, 818
Turret, Equipped with Numerical Control System, Specialties Incorporated, 916
Turret, Precision Chucking, Warner and Swasey Company, 818
Wheel, Maschinenfabrik Deutschland, A.G., 608
Wheel, Underfloor for Railway Vehicles, Wilhelm Hegenscheidt, K.G., 687
Lattice Calculations, Errors Due to Cylindrical Cell Approximation in, (Report, 152)
Launch, High-Speed, "Landward", Philip and Son, Ltd., 41
Jetty, Milford Haven, 363
of the "Sentinel", 1860, 577
Launcher of Light Alloy, Bridge, 33
Launches and Trial Trips, 40, 78, 114, 158, 213, 285, 366, 403, 441, 511, 565, 604, 643, 684, 732, 768, 811, 850, 906, 948, 1026, 1065
Lea Hall Colliery, 308

LEADING ARTICLES

B.O.A.C. and Supersonics, 263
B.T.C. in 1959, The, 49
Abnormal Loads by Road, 300
Another "First" in Space for Russia, 335
Automation on the Road, 169
in the Steel Industry, 696
Back to Steam in Glasgow, 1040
Britain's Nuclear Power Plant Prospects, 129
Broadening the Fusion Research Programme, 577
Centenarian Workers, 224
Century-and-a-Half of Cans, A, 91
Civil and Public Health Engineering, 696
Classification of Warships, 131
Coal Industry, 381
Commercial Motor Show, 487
Confusion in External Affairs, 89
Consultants and Overseas Port Construction, 2
Contacting the Unconscious, 864
County Surveyor on Roads, 697
Crib Revolutionary in Greece, 657
Dangerous Brittleness in Steel, 1000
Design Appreciation for Engineers, 416
Diesel Locomotive Problems, 959
Dip. Tech. (Eng.) Progress, 3
Displaying Farm Machinery, 89
Disturbing Trends at International Conference, 50
"Dragon" in Embryo, 299
"Dreadnought", H.M.S., 655
Electric Traction Development, 575
Electrical Accidents, 656
Plant Manufacture in India, 825
Electricity Supply and Research, 523
Electrifying the Hard Way, 744
Engineers at the British Association, 451
"Enterprise", U.S.S., 379
Estuarial Clean-Up, 379
Europe at Sixes and Sevens, 169
Exciting Address, An, 745
Exports, 129
Fuel Efficiency Progress Survey, 616
Gas Explosions in Mines, 453
Gauge and Tool Makers' Educational Trust, 301
Great Indispersible Clot, A, 1076
Health and the Engineer, 452
Hear the Other Side, 1000
Helping Rural Industries, 336
Holy Loch Base, The, 784
How to Save Money by Saving Water, 921
to Start a Quarrel, 381
Industrial Health, 265
Relations, 525
Industry or Landscape?, 863
Iron and Steel Report, 1
"James Watt" Dinner, 656
Keeping Research in Touch with Needs, 452
Land Drainage and Water Supply, 863
Last of the Few, The, 785
Latent Heat Cooling and Waste Heat Recovery in Diesel Engines, 824
Lloyd's Rules for Nuclear Ships, 224
Machine Tool Activity, 823
Tool Demand and Supply, 864
Tool Design and Research, 576
Tool Industry Research Association, 487
Major Drag on the German Economy, A, 1001
"Mechanicals" Get No Rate Relief, 919
in Ireland, 1
Models for Apprentices, 170
Modernisation: Rail, Road or Both, 743
Monnow Musings, 264
More About Farnborough, 451
Railway "Teething Troubles", 1000
New Cunard Liner, 617
Water Policy Foreshadowed?, 999
Noise is a Nuisance, 89
Oil Engine Maintenance, 2
On Not Burning Coal, 299
Operation "Cleansweep", 488
Organising Customers' Visits, 489
"Oriana", T.S.S., 920
Overseas Better Trained Than Home Graduates?, 783
Plan for Local Broadcasting, 695
"Polaris" Missile, 488
Practical Training for Engineers, 524
Prize-Giving Worth Reporting, A, 865
Progress Towards Clean Air, 615
of Smoke Control, 300
Pros and Cons of the "Polaris" Missile, 961
Radioactive Isotopes from C.E.G.B. Reactors?, 823
Railway Freight Impasse, 264
Rebuilding City Centres, 130
Recruitment of Scientists and Engineers to Government Service, 616
Reflections in the Window, 415
Reinforced Plastics, 960
Remuneration of Engineers, 960
Report on Data Processing, 920
on Research by Industry, 335
on Shipbuilding and Marine Engineering Industries, 1039
Research in Coal-Mining, 1040
Review of Research Activities, 575
Right Road at the Right Place at the Right Time, The, 695
Road Research and the National Road Programme, 523
Safety, 223
Scientific Research is the Yeast of Business, 380
Scientist on Engineers, A, 379
Screwy Screwthreads, 89
Second "New River" in London, 617
Severn Bridge, The, 576
Shipbuilding Criticised, 615
Smoothing the Way, 416
Stopping Fume and Dust Emissions, 49
Thousands of Millions to be Saved, 744
Training of Home Graduates, 784
Transport Reorganisation, 1075
Two Aswan Schemes, The, 919
Upper Atmosphere Achievements, 300
Value of an Origin and Destination Survey for London, 51
Value of Road Improvements, 337
Voting for an Institution Merger, 655
Weights and Measures, 824
Who is to Blame?, 336

Leading, Sharp, Edge Having 65 Degrees Sweep, Some Measurements in the Vortex Flow Generated by a, N. C. Lambourne and D. W. Bryer, (Report, 806)
Leak Detection with Radio-Isotopes, U.K.A.E.A. Wantage Research Laboratory, 438
Lecture, Faraday, 1960/61, Institution of Electrical Engineers, 508
Lee Valley to Thames, Water Tunnel, The, Metropolitan Water Board, 578
Leningrad, "Plastics in Industry" Exhibition at, I.C.I. Plastics Division, 122
Lenoir's Gas Engines, 1860, New Motive Power, 697

LETTERS TO THE EDITOR

Abnormal Loads by Road, D. G. Morgan, 466
Angle of Approach Indicators, J. C. Adams, 890
Aswan High Dam, A. Aziz Ahmed, 1052
Bridge Launcher of Light-Alloy, V. L. Holloway, 240, 352; A. A. Greenfield and R. B. W. Bolland, 276
British Steam Locomotive Since 1900, The, A. E. Durrant, 800, 974; W. A. Tuplin, 890
Contacting the Unconscious, W. D. Arnot, 974
Control of Water Resources, L. J. Cardew Wood, 25
Distribution of Shear Stress in a Box Beam, W. G. Heath, 104; B. A. Walker, 193
Dock and Harbour Engineering, E. V. Burke, 239
East London Harbour, R. D. Williams, 104
Fatal Boiler Explosion, T. Henry Turner, 758
Gas Turbines to Burn Wood Waste, J. L. Harrison-Smith, 714
Germanium and Silicon Power Rectifiers, D. B. Corbyn, 669; D. R. Coleman, 838
Industrial Value of D.S.I.R. Research, G. F. Arkless, 466
Last of the Few, C. Abell, 1018
Last Southampton Paddle Steamer, J. H. Jellett, 25, 428; Wm. C. Budd, 193
Malpasset Dam, W. R. Mitchell, 503
Measuring the Workability of Concrete, R. Davies and J. M. Hawkes, 392
Mechanical Properties of Materials, A. C. Vivian, 393
Modernisation: Road, Rail or Both, R. G. Jarvis, 890; T. I. Lloyd, 1018
Molybdenum Disulphide Concentrates, G. J. Vineall, 240
New Water Policy Foreshadowed?, T. M. Prus-Chacinski, 1108
Notable Locomotives of 1910, H. F. Buxton, 593
Paddle Steamer "Freshwater", G. W. Tripp, 104
Paddle Steamer Preservation, S. Roberts, 503
Passenger Transport Services Compared, T. I. Lloyd, 276
Practical Training for Engineers, R. Dobson, 714; E. G. Bayley, 758
Progress of the Park Lane Improvement Scheme, R. Edmonds, 838
Railway Chaos, M. W. Burnby, 891; A. J. Field, 974
Road Accidents, "Callipides", 631; David Whaley, 890
Road Accidents—B.S.S. 812—Methods of Testing Mineral Aggregates, H. N. Jenner, 800
Road Surfaces—Seeing and Driving, A. J. Field, 758
Ross Motorway, Stewart C. Black, 1052
Roundabouts and Traffic Signals, D. F. C. Vosper, 1052
Rules and Regulations for Structural Steelwork, A. N. Procter, 64
Screwy Screw Threads, A. C. Hutchinson, 193, 503, 1108
Self-Induced Ventilation of Road Tunnels, A. Ellis Hoult, 25
Steam, Turbine Runaways, J. Hattingh, 240
Stiffness of a Crane Jib, M. J. Gercke, 1108
Structural Steelwork, G. Weston, 25
Structural Steelwork and British Standards, W. A. Tuplin, 104; G. Weston, 193; W. A. Tuplin and A. N. Procter, 240
Thousands of Millions to be Saved?, I. G. Moore, 800; Roy G. De Bray, 838; T. I. Lloyd, 890, 974; I. G. Moore and A. I. Watkinson, 934; M. J. Douglass, 1018; W. D. Mitchell, 1052
Transport and the Weather, T. I. Lloyd, 838
"Trav-o-lator", J. R. Edisbury, 758

Level Control, Glass, Forster's Glass Company, Ltd., 1082
in Inaccessible Engines, Device for Maintaining Oil, Equipment and Engineering Company, Ltd., 600
Indication and Control, Thomas Industrial Automation, Ltd., 1023
Indicator, Continuous, Thomas Industrial Automation Ltd., 247
Measurement, Electronic, Electronic Machine Company Ltd., 323
Library of Computer Programmes, Institution of Civil Engineers, 686
Lift, Self-Climbing, Alimak Verken A.B., 682
Lifting Magnets, Extended Range of, General Electric Company, Ltd., 732
Lifts, Automatic Control of, (Patent, 378)
Overload Protection for, (Patent, 297)
Light Alloy, Bridge Launcher of, 33; V. L. Holloway, (Letters, 240, 352); A. A. Greenfield and R. B. W. Bolland, (Letter, 276)
Beam, Speech Transmission by Modulated, General Electric Company Ltd., 210
Sensors, Photovoltaic, Texas Instruments, Ltd., 850
Lighthouse, Dungeness, 206
New Milnerton, in Table Bay, 814
Lighting, Dual-Carriageway, (Patent, 450)
Equipment, Fluorescent, Production, Atlas Lighting, Ltd., 803
Fittings, High-Intensity Elevated Runway, (B.S.I., 88)
Street, Steel Columns for, (B.S.I., 1050)
Lightweight Hoist, Haltrac, Ltd., 78
X-Ray Unit, Pantak, Ltd., 765
Limit Switches, (Patent, 781)
Linear Accelerator for Weld Inspection, 4.3 MeV Mobile, Mullard Equipment, Ltd., 986
Accelerator, Powerful, for Radiographic Inspection, A. O. Smith Corporation, 1072
Electron Accelerator for the N.B.S. 100 MeV, High Voltage Engineering Corporation, 519
Liner, Doxford Cylinder, Temperature Measurements in, B. W. Millington, 871
"Leonardo Da Vinci", Societa Azioni Ansaldo, 329
New Cunard, (Leading Article, 617)
"Oriana", P. & O.-Orient, 962, 1003
for Particle, Accelerator, Radio-Frequency, National Institute for Research in Nuclear Science, 235
R.M.S. "Windsor Castle", Union Castle Mail Steamship Company Limited, 354
Liners, Cylinder, Hard Chrome Plating of, Laystall Cromard, Ltd., 605
Laying of Keels of Italian, Societa per Azioni Ansaldo, 569
Liquefied Petroleum Gas for Engines, Calor Gas (Distributing) Company, Ltd., 565
Liquid Cathode Discharge Devices, (Patent, 449)
Liquids, Opaque, Flow Indicators for, Sir W. H. Bailey and Co., Ltd., 1061

LITERATURE

Books Received, 25, 65, 105, 195, 241, 277, 315, 353, 395, 429, 503, 547, 593, 631, 669, 715, 759, 1019, 1053, 1109

BOOKS OF REFERENCE

Approved Methods for the Physical and Chemical Examination of Water, 393
British Shipbuilding Compendium, 393
Classified List of Equipment and Services, 393
Colliery Year Book and Coal Trades Directory, 1960, 315
Dictionary of Civil Engineering and Construction Machinery and Equipment. English: French, 105
of Terms Used in the Theory and Practice of Mechanical Engineering, 143
Directory of Shipowners, Shipbuilders and Marine Engineers, 1959, 65
Electrical Trades Directory: The "Electrical Journal" Blue Book, 1960, 277
English-Polish Dictionary of Mechanical Engineering, 277
Geometric Properties of Rolled Sections and Built Girders, 429
Guide to the Coalfields, 1960, 315
Hydraulic Handbook, 429
Register of the Gas Industry, 1960, 315
Road Note No. 25, Sources of White and Coloured Aggregates in Great Britain, (1959), 195
South African Mining and Engineering Year Book, 143
Spectrochemical Abstracts, 429
Vocabulary of Classical Mechanics, 143
Water Engineers Handbook, 1960, 105
Year Book of the Heating and Ventilating Industry, 393

REVIEWS

Advanced Structural Design, Cyril S. Benson, 25
Atomkraft, Friedrich Munzinger, 314
American Building Art—The Nineteenth Century, Carl W. Condit, 314
Applied Mechanics for Engineers: Statics, Dynamics, Strength of Materials, J. C. Grassie, 800
Armour, Richard M. Ogorkiewicz, 104
Automatisierung durch Pneumatik und Hydraulik, E. Konig and W. Peenninger, 429
Basics of Induction Heating, Chester A. Tudbury, 839
Caracteristiques des Aciers, 669
Change at Crewe, 891
Civil Engineering Today, Rolt Hammond, 315
Cemented Carbides, P. Schwartz Kopf and R. Kieffer, 195
Commercial Road Vehicles, E. L. Cornwell, 194
Concrete and Soil-Cement Roads, W. P. Andrews, 277
Construction et Etalonage d'une Soufflerie a Gaz tres Rarefie, F. Marcel Devienne, Georges M. Forestier and Andre F. Roustan, 393
Cybernetics and Management, Stafford Beer, 393
Das Waagerecht-Bohr und Fräwerk und Seine Anwendung, 315
Der Deutsche Ingenieur in Beruf und Gesellschaft, Verein Deutscher Ingenieure, 353
Durchlaufende Bogenträger auf Elastischen Stützen mit und ohne Versteifungsträger, Walter Stampt, 714
Design for Flight: The Kurt Tank Story, Heinz Conradis, 65
Destiller-und Rektifiziertechnik, Emil Kirschbaum, 467
Die Regelung in der Heizungs,—Lüftung- und Klimatechnik, 195
Druckverlust und Warmeübergang bei Verwirbelter Strömung, Rudolf Koch, 503
Electromagnetic Fields, Energy and Forces, Robert M. Fano, Lan Jen Chu and Richard R. Adler, 428
Electronics for Spectroscopists, C. G. Cannon, 241
Elementare Schalenstatik, Alf Pfluger, 195
Engineering Mathematics, J. Blakey and M. Hutton, 1019
Examples of the Design of Reinforced Concrete Buildings, C. E. Reynolds, 503
Explorations de la Couche Limite, Jean-Francois Dorand, 429
Fishing Boats of the World, 393
Fleisspressen von Stahl, Heinz D. Feldmann, 839
Foundation Design and Practice: An Economic View, J. H. Thornley, 143
Foundry Engineering, 315
Gasturbinen—Arbeitweise, Gestaltung und Anwendung, K. Leist, 315
General Dynamics of Vibrations, Y. Rocard, 974
Grundlagen Hydrostatischer Antriebe, W. Wanner, 241
Handbook der Werften, 1958, K. Wendel, 467
Handbuch der Kaltetechnik, 3 band, R. Plank, H. D. Baehr and E. Hofmann, 759
Heizöl-Handbuch für Industriefeuerungen, 547
High Productivity in Heavy Engineering, A. G. Thompson, 428
Institution of Naval Architects, 1860-1960, The, K. C. B. Barnaby, 758
Introduction to the Gas Turbine, D. G. Shepherd, 801
to Laplace Transforms for Radio and Electronic Engineers, W. D. Day, 839
Jane's All The World's Aircraft, 1960-61, 1108
Konstruktionen und Bauelemente von Stromungsmaschinen, H. Petermann, 315
Magnesium and its Alloys, V. Sheldon, 934
Main Lines Across the Border, O. S. Nock, 64
Mechanical Properties of Intermetallic Compounds, J. H. Westbrook, 801
Mechanics of Materials, Archie Higdon, 891

Methodes Topologiques Appliquees a l'Electronique, L. Sideriades, 352
Mineral Use Guide, 315
Nomographische Methode der Berechnung Komplizierter und Stark Gesattigter Magnetischer Kreise Elektrischer Maschinen, Otto Benedikt, 241
Pilkington Brothers and the Glass Industry, T. C. Barker, 353
Practical Welding Repairs, C. G. Bainbridge, 429
Principles of Guided Missile Designs—Systems Preliminary Design, 669
of Servomechanisms, A. Tyers and R. B. Mills, 1019
Probability and Statistical Inference for Engineers, C. Derman and M. Klein, 65
Proceedings of the National Fire Protection Conference, 241
Process Engineering Calculations: Material and Energy Balances, Mack Tyner, 241
Progress in Cryogenics, K. Mendelssohn, 547
Refrigeration Controls, Harold H. Eggington, 715
Repertorium und Ubungsbuch der Technischen Mechanik, Istvan Szabo, 714
Roads and Their Traffic, Ernest Davies, 352
Rocket Propellant Handbook, B. Kit and D. S. Evered, 392
Roll Pass Design, 466
Singularitätentheorie der Flügelgitter, Ludwig Meyer, 105
Sir Casimir Stanislaus Gzowski: A Biography, Ludwik Kos-Rabcewicz-Zubkowski and William Edward Greening, 194
Space Flight Vol. 1, Environment and Celestial Mechanics, Krafft Ehricke, 352
Spannbetonbau, Part I, W. Hereberg, 1053
Stufenlos Verstellbare Mechanische Getriebe, F. W. Simonis, 631
Sur Quelques Problèmes Posés par l'Experimentation en Soufflerie Aerodynamique, A. Martinot-Lagarde, 801
Surface Effects on Spacecraft Materials, First Symposium, Francis J. Clauss, 547
Survival at Sea, G. W. R. Nicholl, 428
Technische Uberwachung, VDI-Verlag, G.m.b.H., 593
Technischer Strahlenschutz, Thomas Jaeger, 714
Telegraphs in Victorian London, John Durham, 428
Theory of Mechanical Vibrations, Kin N. Tong, 276
Thermochemistry for Steelmaking, John F. Elliott and Molly Gleiser, 631
Third International Congress of the Federation Internationale de La Precontrainte, Cement and Concrete Association, 314
Tin and its Alloys, E. S. Hedges, 142
Torsion Devices: A Survey of Instrument Parts, P. J. Geary, 143
Using Centrifugal Pumps, E. Allen, 1053
Vacuum Processing in Metalworking, J. Wesley Cable, 715
Wärme-und Stoffaustausch in Arbeitsdiagrammen auf Projektiver Grundlage, Werner Matz, 195
Waste Treatment. Proceedings of the Symposium on the Treatment of Waste Waters, P. C. J. Isaac, 593
Zone Refining and Allied Techniques, N. L. Parr, 142

Lloyd's Rules for Nuclear Ships, Lloyd's Register of Shipping, (Leading Article, 224)
Load Clamps, Fork Truck, R. H. Corbett & Co. Ltd., 440
Handling Trollies, Collico, Ltd., 765
Loading Calculator, Ship, Sperry Gyroscope Company, Ltd., 114
Loads by Road, Abnormal (Leading Article, 300); D. G. Morgan (Letter, 466)
Local Broadcasting, Plan for, (Leading Article, 695)

LOCOMOTIVES

British Railways Type 4 Diesel Locomotives, 1025
British Steam Locomotive Since 1900, W. A. Tuplin, 395; A. E. Durrant, (Letters, 800, 974)
Diesel Locomotive Maintenance Depot, British Railways, Eastern Region, 509
-Hydraulic Industrial Shunter, Ruston and Hornsby, Ltd., 211
Locomotive Problems, (Leading Article, 959)
Locomotive 2000 b.h.p., Fried Krupp Maschinenfabriken, 1070
Locomotives for East Africa, Robert Stephenson and Hawthorns, Ltd., 365
Locomotives in the United States, H. F. Brown, 926
Electric Locomotives for South Africa, Associated Electrical Industries Limited, Traction Division, 358
Heavy Locomotive for Ore Line, ASEA, 952
Last of the Ironclads, Lancashire and Yorkshire Railway, 509
Locomotive Building at Vulcan Foundry, 601
Tap-Changer, 591
Locomotives, Water-Cooled Ignitron Frame for, The English Electric Company, Ltd., 591
Longsight Electric Locomotive Depot, British Railways, London Midland Region, 112
Motors for A.C. Locomotives, Associated Electrical Industries, Ltd., 213
Notable Locomotives of 1910, H. F. Buxton, 593
"Shay" Geared Steam Locomotive, The, 1879-1945, R. A. S. Abbott, 1041
Some Notable Locomotives of 1910, E. C. Poultney, 266
Wheel Pairs for Locomotives and Rolling Stock (Dimensions), (B.S.I., 298)

Logic Units, Miniature, Panellit Ltd., 403
London Airport, New Instrument Landing System at, Standard Telephones and Cables, Ltd., 209
Conference on Overseas Students, Overseas Students in Britain, 680
North-East, Railway Electrification, 895
Office Building, New, English Electric Group, 401
Passenger Transport, 271
Second "New River" in, Metropolitan Water Board, (Leading Article, 617)
Transport Underground Trains, New, Cravens, Ltd., 844
Londonderry, Neoprene Production Plant at, Du Pont Company (United Kingdom) Ltd., 244
Longsight Electric Locomotive Depot, British Railways, London Midland Region, 112
Lorries, Platform Crane for, Steinbock, G.m.b.H., 445
Low Pressure Electric Discharge Lamps, (Patent, 997)
Lubricant Flow Indicators, Alan Muntz and Co. Ltd., 157
Lubricants, Rubber, Dispenser for, with Storage for Brush and Mop, 720
Water-Repellent, Imperial Chemical Industries, Ltd., Nobel Division, 75
for Cold-Rolling Aluminium and its Alloys, Metallurgical Engineering Committee, Institute of Metals, 581
Testing, under Gamma Irradiation, Rig for, Mobil Oil Company, Ltd., 639
Lubrication, Overhead Crane Wheel Flange, Acheson Colloids, Ltd., 850
Tubes with Hollow Cast Crankshafts, (Patents, 653)

M

Macadam, Coated, and Asphalt Plant, Millars' Machinery, Ltd., 834

MACHINE TOOLS AND MACHINE SHOP EQUIPMENT

Automatic Bundling Machine for Billets and Wire Bars, Loma Manufacturing Company, 166
Cutting of Transformer Core Plates, Ferranti, Ltd., 966
Grinding Machine for Gear Teeth, Michigan Tool Company, 46
Automobile Brake-Shoe Rolling Machine, King's Heath Engineering Company, Ltd., 731
Band Saw Blades, (Patent, 334)
Billet Handling Equipment for Rotary Hearth Furnace, Hymatic Engineering Company, 945
Blow-Moulding Machine, Matthew Wylie and Co., Ltd., 1033
Bores of Hollow Bodies, (Patent, 167)
Boring and Turning Mill, Webster and Bennett, Ltd., 1060
Centre Drill, KESTAG, 817
Chucks for Drilling, (Patent, 1074)
Cold Rolling Mill Expansion in New Jersey, Athenia Steel Division National-Standard Company, 651
Conference on Machine Tool Design and Research, University of Birmingham, Department of Mechanical Engineering, 208
Das Waagerecht-Bohr und Fräswerk und Seine Anwendung, (Review, 315)
Device for Feeding the Tool in Machine Tools, (Patent, 917)
Drill Jig for Cylindrical Work, Revel Engineering Company, Ltd., 810
Drilling and Tapping Machine with Automatic Indexing Table, James Archdale & Co., Ltd., 249
Drum Abrasive Band Sanders, B. O. Morris, Ltd., 603
Dual-Purpose Milling Machine, AB Sandéns Mekaniska Verkstad, 1033
Duplex Head Multi-Spindle Drilling Machine, Kitchen and Wade, Ltd., 768, 808
Electric Overhead Travelling Cranes, K. E. Booth and W. S. Cartwright, 789
Extended Range of Lifting Magnets, General Electric Company, Ltd., 732
Extrusion Press in Indiana, 14,000 ton, Aluminium Company of America, 572
Face Milling Cutters, Wickman Ltd., 285
First Machine Tool Design and Research Conference, Hugh Clausen, 629; (Leading Article, 576)
"Fluid-Form" Process, Hugo Möller, 968
Foundation for Roll Grinding Machines, P. H. Allaway, 457
Gauge and Tool Makers' Educational Trust, (Leading Article, 301)
Gear Deburring Machine, Burrows and Smith, Ltd., 1063
Hanover Machine Tool Exhibition, 568, 608, 649
Heavy Duty Crankshaft Turning Lathe, Henry Broadbent, Ltd., 249
Interchangeability of Shanks and Squares, D. M. Cowley, 351
International Machine Tool Exhibition, 9, 54
Large Special Purpose Contour Milling Machine, Coventry Gauge and Tool Company, Ltd., 985
Turbine Disc Slot Broaching Machine, J. L. Jameson, Ltd., 494
Unit-Construction Lathe, Craven Brothers (Manchester), Ltd., 809
Low-Cost Reversing Narrow Strip Rolling Mill, Lowe Machine Manufacturing Company, 652
Machine Tool Activity, Machine Tool Advisory Council, (Leading Article, 823)
Tool Demand and Supply, Machine Tool Trades Association, (Leading Article, 864)
Tool Development and the National Economy, Sir Stanley Rawson, 23
Tool Exposition and Production Engineering Show at Chicago, 777, 818, 855, 911, 954
Tool Industry Research Association, (Leading Article, 487)
Tool Production, Hindustan Machine Tools, (H.M.T.), 288
Tool Research, Design and Utilisation, D. F. Galloway, 1081
Tools, Machine Tool Trades Association, 115, 286
Magnetic Drill Stands, Magco Ltd., 439
Moulds, Dies and Forming Tools, (Patent, 1122)
Multiple Tooth Broaches, (Patent, 167)
Optical Comparators, Heston Aircraft and Associated Engineers Ltd., 285
Depth Control for Horizontal Boring Machines, H. W. Kearns and Co. Ltd., 765
Permanent Magnet Chuck, Darwins, Ltd., 902
Pinch Pyramid Plate Bending Rolls, Bronx Engineering Company, Ltd., 942
Plutonium Rolling Mill Installation, Loma Machine Manufacturing Company, 956
Pneumatic Sawing or Filing Tool, Consolidated Pneumatic Tool Company, Ltd., 947
Portable Blast Cleaner, Hodge Clemco Ltd., 76
Precision Cylindrical Grinding Machine, Coventry Gauge and Tool Company, 322
Presses, (Patent, 917)
Heavy-Duty, Danly Machine Specialities, Inc., 114
Hydraulic, Rhodes, Gill & Co. Ltd., 212
Power, (Patent, 521)
Production Lathe with Multi-Cut Cycling, Monarch Machine Tool Company, 296
Radial Drilling and Tapping Machine, A. Kitchen, D. Walker, 942
Railway Wheel Lathe, Craven Brothers (Manchester), Ltd., 906
Roll Pass Design, United Steel Companies Ltd., (Review, 466)
Screw-Cutting Stationary Workpieces, (Patent, 917)
Seismic Mountings for Large Machine Tools, J. A. Macinante, 880
Sensitivity of Slow Shifting Under Stick-Slip Conditions, B. R. Singh, 187
Shearing Machines, Keeton Sons and Co., Ltd., 639
Slug Heating Furnace, Royce Electric Furnaces Ltd., 440
State of the Machine Tool Industry, Machine Tool Advisory Council, 840
Tool Holders and Chucks, (Patent, 1121)
Transfer Machine for Motor Car Wheel Hubs, 1036
Machines for High-Precision Finishing Operations, Cross Company, 219
Machining of Tractor Rear Axle Housing, Cross Company, 165
Tube Calibrating Mill, 688
Tube Saw, Sir James Farmer Norton and Co. Ltd., 511
Underfloor Wheel Lathe for Railway Vehicles, Wilhelm Hegenscheidt, K.G., 687
Universal Punching and Shearing Machine, Valdarno, S.A., 993
Vertical Spindle Grinding Machine, Mattison Machine Works, 475

Machine Translation of Languages and Applied Language Analysis, International Conference on, 1116
Machining and Welding, by Electron-Beam Bombardment, United Aircraft Corporation, Hamilton Standard Division, 738
Magnesium Alloys for Fuel Element Components, Nuclear Energy Committee, Institute of Metals, 583
and its Alloys, C. Sheldon, (Review, 934)
Magnet Chuck, Permanent, Darwins, Ltd., 902
Magnetic Drill Stands, Magco, Ltd., 439
Suspension of Wind Tunnel Models, Office National d'Etudes et de Recherches Aeronautiques, 607
Switching Circuits, (Patent, 298)
Magnetohydrodynamic Generators, Westinghouse Electric Corporation, 123
Magnetostriction Delay Line, Variable, Ferranti Electric, Inc., 730
Magnetrons, Multi-Cavity, (Patent, 741)
Magnets, Lifting, Extending Range of, General Electric Company, Ltd., 732
Maidstone By-Pass Motorway, Completion of, 981
Main Line Electrification, First British 25kV, British Railways, London Midland Region, 461, 499
Transformer, Undercar, Associated Electrical Industries, Ltd., 591
Mains-Failure Generator Control Panel, Southern Instruments, Ltd., 943
Maintenance, Depot, Diesel Locomotive, British Railways, Eastern Region, 509
Oil Engine, (Leading Article, 2)
Malpasset Dam, W. R. Mitchell, (Letter, 503)
Management and Cybernetics, Stafford Beer, (Review, 393)
Development Schemes, British Institute of Management, 988
Manifold Injection System, Simms Motor Units, Ltd., 721
Injection System, Pump of the "Simms", Coventry Climax Engines, Ltd., 721
Manipulation of Metals, Institution of Production Engineers, 718
Manzoni, Sir Herbert. Civil Engineer—His Influence and Authority, 746
Margam "B" Power Station, Steel Company of Wales, 101
Marine Diesel Engine, Large Bore, Sulzer Brothers, Ltd., 1077
Diesel Engine, 25,000 b.h.p. A/S Burmeister and Wain, 1032
Engineering Industries, Report on Shipbuilding and, Department of Scientific and Industrial Research, (Leading Article, 1039)
Radar Series, Improved, Decca Radar, Ltd., 802
Transmitters, Wideband Amplifiers for, 37
Martensitic Stainless Steels, (Patent, 48)
Maser, Optical, Used in Communication Experiments, Bell Telephone Laboratories, 1035
Mass Flow and the Mixing Process in Low-Velocity Air-Ejectors, L. J. Kastner and J. B. McGarry, 190
Haul Curve, F. Bettess, 341
Spectrometer, Atlas-Werke, A.G., 771
Master Cylinder, Tandem, Girling, 808
Mastic Asphalt Transporter, Gas-Fired, Braham, Patterson and Benham, Ltd., 799
Materials, Mechanical Properties of, A. C. Vivian, (Letter, 593)
Mechanics of, Archie Higdon, (Review, 891)
Mathematics, 502
Engineering, J. Blakey and M. Hutton, (Review, 1019)
"Matrix" Grinding Machines, Coventry Gauge and Tool Company, Ltd., 9
Measuring the Air Content of Oil, New Instruments for, A. T. J. Hayward, (Report, 1058)
the Bubble Content of Bubbly Oil, Methods of, A. T. J. Hayward, (Report, 1058)
Machine, Individual Base Circle Involute, Gear Grinding Company, Ltd., 18
Static Temperature in Supersaturated Expanding Steam, an Indirect Method of, Denis J. Ryley, 343
Very Small Bores, Instrument for, P. W. Harrison and G. M. Severn, 467
the Workability of Concrete, R. Davies and J. M. Hawkes, (Letter, 392)
Measurement of Density by Means of Gamma Ray Absorption, Continuous, Allgemeine Elektricitäts-Gesellschaft,
of Pedal Force, Robert Bosch G.m.b.H., 910
Surface Finish, Payne Products International, Ltd., 941
Techniques, Microwave, Institution of Electrical Engineers, Electronics and Communications Section, 1024
Measurements and Instruments Conference and Exhibition, 217
Temperature, in a Doxford Cylinder Liner, B. W. Millington, 871
in the Vortex Flow Generated by a Sharp Leading Edge Having 65 Degrees Sweep, N. C. Lambourne and D. W. Bryer, (Report, 806)
Measures and Weights, (Leading Article, 824)
Mechanical Engineering Research, Progress in South African, Mechanical Engineering Research Unit, 1029
Engineering, Scientist's Contribution to, Owen A. Saunders, 760
Press with Automatic Slide Positioner, Danly Machine Specialties Inc., 778
Properties of Intermetallic Compounds, J. H. Westbrook, (Review, 801)
Properties of Materials, A. C. Vivian, (Letter, 593)
Vibrations, Theory of, Kin N. Tong, (Review, 276)
"Mechanicals" at Dinner, 724
Get No Rate Relief, (Leading Article, 919)
in Ireland, (Leading Article, 1)
Mechanics, Applied, for Engineers: Statics, Dynamics, Strength of Materials, J. C. Grassie, (Review, 800)
of Materials, Archie Higdon, (Review, 891)
Vocabulary of Classical, (Review, 143)
Mechanised Assembly of Television Receivers, General Electric Company, Ltd., 203
Car Park, Myton, Ltd., 683
Foundry, Qualcast, Ltd., 640
Telephone Accounting, International Computers and Tabulators, Ltd., 110
Medicine, Electronics in, Institution of Electrical Engineers, Electronics and Communications Section, and International Federation for Medical Electronics, 204
Meetings, Joint, on Applications of Electricity in Aircraft, Institution of Electrical Engineers and Royal Aeronautical Society, 765
Melting Furnace, Aluminium, Morgan Crucible Company, Ltd., 1026
Vacuum Arc, Installations, (Patent, 653)
Merchant Shipbuilding Returns, Lloyd's Register of Shipping, 214
Merger, Institution, Voting for, Civil Engineers and Institution of Municipal Engineers, (Leading Article, 655)
Metal-Sprayed Structural Steelwork, British Iron and Steel Research Association, 110
Sheet, Contact Resistance of, Siemens-Schuckerwerke A.G., 952
Metallised Materials, E. S. and A. Robinson Ltd., 251

METALLURGICAL TOPICS

Aluminium Alloys in Railway Rolling Stock, T. Henry Turner, 26
Melting Furnace, Morgan Crucible Company, Ltd., 1026
Scrap, Association of Light Alloy Refiners and Smelters, Ltd., 686
Behaviour of Metals Under High Hydrostatic Pressure, H. Ll. Pugh and D. Green, 280
Better Plating on Die Castings, British Non-Ferrous Metals Research Association, 236

Bonding of Dissimilar Metals, Ladd & Little Incorporated, 332
Bright Parts, 237
Charging Devices for Shaft Furnaces, (Patent, 333)
Control of Corrosion, 319
Corrosion Problems in the Petroleum Industry, Society of Chemical Industry Corrosion Group, 391
Corrosiveness of Indoor Atmospheres, Iron and Steel Institute, Atmospheric Corrosion Sub-Committee, 935
Equipment for Aluminium Works at Kitts Green, James Booth Aluminium, Ltd., 39
Expansion of Rogerstone Aluminium Strip Mill, Alcan Industries, Ltd., 635, 661
First International Congress on Metallic Corrosion: London, 1961, 935
Heat-Treatment of Metal Parts, (Patent, 377)
Hot Shaping of Metals and Metal Alloys, (Patent, 334)
Inert Atmosphere Processing Facility for Refractory Metals, Universal-Cyclops Steel Corporation, 410
Ingot Casting Machines, (Patent, 957)
Institute of Metals: Autumn Meeting, 281
Lubricants for Cold-Rolling Aluminium and its Alloys, Metallurgical Engineering Committee, Institute of Metals, 581
Magnesium and its Alloys, C. Shelden, (Review, 934)
Manipulation of Metals, Institution of Production Engineers, 718
Metallised Materials, E. S. and A. Robinson, Ltd., 251
Metals, Manipulation of, Institution of Production Engineers, 718
the Study and Use of, Institution of Metallurgists, 757
Metallurgical Reviews, 671
Metallurgy of Beryllium International Conference, 1961, The, Institute of Metals, Nuclear Energy Committee, 935
Mineral Processing, 390
Moulding Processes and Materials, (Patent, 613)
Nickel, 391
Non-Ferrous Metallurgists in the West of England, T. Henry Turner, 580
Open Coil Processes of Annealing and Gas Alloying, Lee Wilson Engineering Company, 650
Powder Metallurgy, 1111
Production of Aluminium Bar Stock by Casting and Cold Extrusion, Hunter Engineering Company, 258
Protecting the Lining of Rotary Furnaces for Treating Molten Metal, (Patent, 414)
Protection of Gas Plant and Equipment from Corrosion, Corrosion Group of the Society of Chemical Industry, 670
Purer Metals, Johnson, Matthey and Co. Ltd., 401
Reduction of Nickel Oxide, (Patent, 957)
Sand Moulds, (Patent, 522)
Silicon Rectifier, 6000kW, for Aluminium Smelting, Westinghouse Electric Corporation and Aluminium Company of America, 571
Star Aluminium Jubilee, 1028
Surface Treatments for Aluminium, Pyrene Company Limited, 364
Surface Treatment for Aluminium, Durham Raw Materials, Ltd., 565
Symposium on the Determination of Gases in Metals, 237
Teaching of Metallurgy to Engineers, T. Henry Turner, 1110
Theoretical Extraction, D. J. G. Ives, 27
Ultrasonics in Gold Plating Process, Dawe Instruments, Ltd., 1063
Vacuum Arc Melting Installations, (Patent, 653)
Vacuum Processing in Metalworking, J. Wesley Cable, (Review, 715)

Meteorological and Communication Satellites, 384
Meter Diaphragms, Gas-Compatible, 107
Miniature Clip-On, Ferranti, Ltd., 76
Water, Centenary, Manchester Water Meter Company, Ltd., 973
Meters, Frequency, Electrical, (Patent, 1073)
Panel, Semi-Flush, Salford Electrical Instruments Ltd., 78
Mexico, British Trade Fairs in, 769
Micro Projection Apparatus, Carl Zeiss, 480
Microfilm Copying Machine, Ozalid Company, Ltd., 985
Micrometer, Evolution of the Workshop, C. St. C. Davison, 196
Microscope, Photoelectric, Hilger and Watts, Ltd., 63
Microwave Components, Aveley Electric, Ltd., 1060
Frequency Checking Equipment, Standard Telephones and Cables, Ltd., 1114
Link in New Zealand, First Broadband, Standard Telephones and Cables, Ltd., 983
Measurement Techniques, Institution of Electrical Engineers, Electronics and Communications Section, 1024
Midlands and Scotland, Telephone Developments in, A.E.I. Telecommunications Division, 39
Milford Haven Oil Refinery, Esso Petroleum Company, Ltd., 805, 828
Military Vehicles, American, R. M. Ogorkiewicz, 1054
Mill, Animal Feeding Stuffs in Belfast, Associated Feed Manufacturers, Ltd., 722
Cold Rolling, Expansion in New Jersey, Athenia Steel Division National-Standard Company, 651
Strip, Aluminium, Expansion of, Rogerstone, 661
Tube Calibrating, 688
Milling and Boring Machine, Horizontal, DeVlieg Machine Company, 914
and Boring Machine, Horizontal, Barnes Drill Company, 914
Cutters, Face, Wickman Ltd., 285
Drilling and Boring Machine, Horizontal, Giddings and Lewis Machine Tool Company, 860
Machine, Bridge Type Profile and Contour, Cincinnati Milling Machine Company, 913
Machine, Cam, Tape-Controlled, Brown and Sharpe Manufacturing Company, 913
Machine, Dual-Purpose, AB Sandéns Mekaniska Verkstad, 1033
Machine, Heavy-Duty Vertical Production, Midgley and Sutcliffe, Ltd., 14
Machine, Horizontal Contour, Giddings and Lewis Machine Tool Company, 859
Machine, Large Special Purpose Contour, Coventry Gauge and Tool Company, Ltd., 985
Machine, Plane, Kendall and Gent, Ltd., 61
Machine, Planer Type, G. A. Gray Company, 859
Machine, Small High-Speed, Newage Machine Tools, Ltd., 22
Machine, Tape-Controlled Production, Kearney and Trecker Corporation, 912
Machine, Two-Spindle Horizontal and Vertical, Selson Machine Tool Company, Ltd., 14
Machine, Vertical Universal Head, Balding Engineering Ltd., 58
Machines, Adcock and Shipley, Ltd., 20
Milnerton Lighthouse in Table Bay, New, 814
Mine Conveyors, Hydraulic Drive for, Richard Sutcliffe, Ltd., 944
Mineral Aggregates, Methods of Testing,—B.S.S. 812—Road Accidents, H. N. Jenner, (Letter, 800)
Processing, 390
Separator, Magnetic, Rapid Magnetic Ltd., 364
Use Guide, (Review, 315)

MINES AND MINING

Coal-Cutting and Like Mining Machines, (Patent, 413)
Edge Cracking of a Steel Band Conveyor, G. C. C. Parker, T. Furman, K. W. Chandler, 1099
Factory for the Production of Rock Drilling Equipment, Sandvik Steelworks Company, Ltd., 1033
Gas Explosions in Mines, (Leading Article, 453)
Hawthorn Combined Mine, National Coal Board, 826
Hydraulic Drive for Mine Conveyors, Richard Sutcliffe, Ltd., 944
Magnetic Mineral Separator, Rapid Magnetic Ltd., 364
Miners' Wages, National Coal Board, 286
Mines and Quarries, 324
Mining Research Establishment, National Coal Board, 1057
Mobile Mine Tower, E. Taylor and Sons (Manchester) Ltd., 403
Portable Thruster Rig for Rock Drills, Holman Brothers, (Proprietary) Ltd., 38
South African Mining and Engineering Year Book, (Review, 143)
Tin and its Alloys, E. S. Hedges, (Review, 142)
Turbodrilling of Exploratory Bore-Holes, Ets. Neyrpic, Grenoble, 444
Water Infusion Equipment, Richard Sutcliffe, Ltd., 731
Zone Refining and Allied Techniques, N. L. Parr, (Review, 142)

Miniature Ball Bearing Race Grinding Machine, Van Norman Machine Company, 911
Contactors, Londex, Ltd., 77
Computer Drum, IBM, United Kingdom Ltd., 441
Logic Units, Panellit Ltd., 403
Missile Designs—Systems Preliminary Design, Principles of, Guided, (Review, 669)
"Polaris", (Leading Article, 488)
"Polaris", Pros and Cons of the, (Leading Article, 961)
"Seacat" Short-Range Ship-to-Air, 421
Missiles, Avro "Blue Steel", 420
Mission to the Argentine and Chile, Council of British Manufacturers of Petroleum Equipment, 476
Mixer for Concrete, Pan, Blaw Knox, Ltd., 510
Truck, 4 Cubic Yard, Thos. W. Ward, Ltd., 799
Mixing and Batching Plant, Automatic Concrete, Winget, Ltd., 835
Process and Mass Flow in Low-Velocity Air Ejectors, L. J. Kastner and J. B. McGarry, 190
Mobile Linear Accelerator for Weld Inspection, 4.3 MeV, Mullard Equipment, Ltd., 986
Mine Tower, E. Taylor and Sons (Manchester) Ltd., 403
Plate Lifting Machine, Thos. Adshead and Son, Ltd., 211
Pneumatic Conveying Equipment, F. E. Callow (Engineers), Ltd., 1062
Radio Committee Report, 681
Screening and Stockpiling Conveyor, Michael and Partners Ltd., 400
Service Training Unit, British Motor Corporation Ltd., 436
Staging, Bristol Aircraft Ltd., 284
Tower Cranes for Two- and Three-Story Building, (Report, 759)
Model 44LR Lathe, Sykes Machine Tool Company, Ltd., 12
Models for Apprentices, (Leading Article, 170)
Modernisation: Rail, Road or Both, (Leading Article, 743); T. I. Lloyd, (Letter, 1018)
Modulation, Pulse Code, Institution of Electrical Engineers, 796
Mogden, Recent Developments in Sewage Plant and Control, 887
Mol Nuclear Fuel Processing Plant, Inauguration of, 162
Molten Metal, Protecting the Lining of Rotary Furnaces for Treating, (Patent, 414)
Molybdenum Disulphide Concentrates, G. J. Vineall, (Letter, 240)
Monitor, Automatic Beryllium, Winston Electronics Ltd., 321
Automatic Burette, 600
Fault, for Floor Warming Cables, British Insulated Callender's Cables, "Panelec" Heating Division, 439
Plutonium-in-Air, Atomic Weapons Research Establishment, 320
for Recording Radio-Activity in Water, Elliott-Automatic, Ltd., 806
Monitoring and Display, Data, Redifon Ltd., 323
System with Digital Printer, Bailey Meters and Controls, Ltd., 810
Monitors, Radiation, Cadmium Sulphide Photocells as, A.E.I. Radio and Electronic Components Division, 75
Monnow Musings, (Leading Article, 264)
Monotower, Shipyard Crane, 100-ton, Travelling, Butters Brothers & Co. Limited, 385
Mont Blanc Road Tunnel, 478, 515
Morgan-Mintex, 812
Moscow, British Trade Fair, Association of British Chambers of Commerce, 769
Moselle Canal Progress, 216, 255, 290
"Motive Power, New—Lenoir's Gas Engines", 1860, 697
Motor Car Wheel Hubs, Transfer Machine for, 1936
Coach, Notchless Control and Silicon, Rectifiers in, English Electric Company, Ltd., 601
Coach Rectifier Transformer, Brush Electrical Engineering Company, Ltd., 561
Cycle and Cycle Show, 842
Cycle Police Radio, General Electric Company, Ltd., 212
Show, Commercial, (Leading Article, 487), 526, 672
Speed Controller, Improved, Servomex Controls Ltd., 283
Vehicle, Planning and the, Town and Country Planning Association, 724
Motors for A.C. Locomotives, Associated Electrical Industries Ltd., 213
Single Phase, (Patent, 333)
Motorway, Maidstone By-Pass, Completion of, 981
Progress, Birmingham-Preston, John Laing and Son, Ltd., 768
Ross, 932; Stewart C. Black, (Letter, 1052)
Schemes, Modification of Two, 641
Motorways: Some Constructional Problems, H. Bowdler, 630
Moulded Circuit Boards, Albright and Wilson (Mfg.), Ltd., 74
Moulding, Blow, Machine, Matthew Wylie and Co., Ltd., 1033
Breakdown Agent for Carbon Dioxide/Sodium-Silicate, Distillers Company, Ltd., 211
Injection, Apparatus, (Patent, 485)
Machine, Blow, Amigo Machine Company, Ltd., 1065
Processes and Materials, (Patent, 613)
Moulds, Dies and Forming Tools, (Patent, 1122)
Sand, (Patent, 522)
Mountains, Vehicle Braking in, Ferodo, Ltd., 601
Mountings, Seismic, for Large Machine Tools, J. A. Macinante, 880
Moving Pavement or "Trav-o-lator" for Railway Passengers, 585
Multi-Cut Cycling, Production Lathe with, Monarch Machine Tool Company, 296
Multi-Form Grinding Machine, Sheffield Corporation, 858
Multi-Purpose Cross-Country Vehicle, F. Maili Traktoren-und Greiferräderfabrik, 816
Multi-Point Recorder, Adaptable, Honeywell Controls, Ltd., 1060
Multi-Spindle Automatic, Automatic Chucking, B.S.A. Tools, Ltd., 62
Drilling Machine, Duplex Head, Kitchen and Wade, Ltd., 768, 808
Multi-Unit, Machine, Automatic, Sykes Machine Tool Company, Ltd., 12
Trains for Suburban Electrification, British Railways, Eastern Region, 667
Multiple Tooth Broaches, (Patent, 167)
Multispan Roofs, Wind Forces on, J. D Haddon, 536
Municipalities, Engineers and Architects in, Institution of Municipal Engineers, 984
Museum, Science, Birmingham, Birmingham City Council, 729

N

N.B.S. Laboratories in Maryland, Construction of New, 691
Narrow Delta, Handley Page H.P.115, 454
Strip, Rolling Mill, Low-Cost Reversing, Lowe Machine Manufacturing Company, 652
National Coal Board, Cynheidre Colliery, 904
Road, Programme, Road Research and the, (Leading Article, 523)
Nationalised Transport Undertakings, Reorganisation of, 1079
Natural Gas Supply for Whitby, North Eastern Gas Board, 552
Resources in Scotland, Scottish Council (Development and Industry), 438
Naval Architects, 1860-1960, the Institution of, K. C. B. Barnaby, (Review, 758)
Navigation Communications and Approach Facilities V.H.F., Elliott Brothers (London) Ltd., 455
Navigational Aids, Radar, Murphy Radio, Ltd., 511
Navier and Clebsch, Contributions to the Theory of Statically-Indeterminate Frames, T. M. Charlton, 712
Navy, Royal, Electrical Engineering in the, Sir Hamish MacLaren, 626
Needle Roller Tracks, Insley Industrial Supply Company, Ltd., 63
Negotiation, Joint, Ministry of Labour, 907
Neoprene Production Plant at Londonderry, Du Pont Company (United Kingdom) Ltd., 244
New Jersey, Cold Rolling Mill Expansion in, Athenia Steel Division National-Standard Company, 651
London Office Building, English Electric Group, 401
Motive Power—Lenoir's Gas Engines, 1860, 697
River in London, Second, Metropolitan Water Board, (Leading Article, 617)
Zealand, First Broadband Microwave Link in, Standard Telephones and Cables, Ltd., 983
Newhaven, Tug for, M.V. "Meeching", G. W. Tripp, 275
Nickel, 391
-Base Alloys, Engineering Properties of, 580
Oxide, Reduction of, (Patent, 957)
Nigeria, Oil Search in, Shell-BP Petroleum Development Company, 563
"No-Break" Supply for Norwegian Telecommunication Services, 475
Noise, 464
is a Nuisance, (Leading Article, 89)
Reduction and Sound Insulation, (B.S.I., 1050)
Non-Destructive Testing in Electrical Engineering, November, 1961, Conference on, Measurement and Control Section, Institution of Electrical Engineers, 198
Non-Ferrous Metallurgists in the West of England, T. Henry Turner, 580
Non-Return Valves, (Patent, 222)
Nord CT-41 Target Drone, Sir W. G. Armstrong Whitworth Ltd., 421
North-East London Railway Electrification, 895
Northern Ireland, Carbide and Acetylene Plant in, British Oxygen Engineering, Ltd., 40
Norwegian Telecommunication Services, "No-Break" Supply for, 475
Notchless Control and Silicon Rectifiers in Motor Coach, English Electric Company, Ltd., 601
Notes from New South Wales, 1860, 131

NUCLEAR ENERGY

I.A.E.A. General Conference, 646
Alternating Gradient Synchrotron at Brookhaven National Laboratory, 446, 481
Analogy between the Bubbling of Air into Water and Nucleate Boiling at Saturation Temperature, G. B. Wallis, (Report, 8)
Atomkraft, Friedrich Munzinger, (Review, 314)
Automatic Beryllium Monitor, Winston Electronics Ltd., 321
Britain's Nuclear Power Plant Prospects, Royal Society, (Leading Article, 129)
Broadening the Fusion Research Programme, United Kingdom Atomic Energy Authority, (Leading Article, 577)
Cadmium Sulphide Photocells as Radiation Monitors, A.E.I. Radio and Electronic Components Division, 75
CERN Pneumatic Platform, European Organisation for Nuclear Research, 992
Charge-Discharge Machines at Bradwell Nuclear Power Station, Strachan and Henshaw, Ltd., 804
Design of Reinforced Cylinder for Nuclear Reactor Pressure Vessel, R. W. Lakin and S. S. Gill, 495
Detection of Gamma Radiation by Induced Conductivity, C. G. Clayton, 280
Dounreay Fast Reactor, Institution of Mechanical Engineers, 978, 1011, 1046
"Dragon" in Embryo, (Leading Article, 299)
"Dragon" High-Temperature Reactor, O.E.E.C. High-Temperature Reactor Project, 302, 338
Dungeness Nuclear Power Station, Central Electricity Generating Board, 153
Electronic Extensometer, U.K. Atomic Energy Authority, 731
Encyclopedic Dictionary of Electronics and Nuclear Engineering, Robert L. Sarbacher, (Review, 715)
"Enterprise", U.S.S., (Leading Article, 379)
Errors Due to Cylindrical Cell Approximation in Lattice Calculations, (Report, 152)
Evolution of Nuclear Power Plant Design, Sir Christopher Hinton, 225
Exporting Knowledge About Graphite, The General Electric Company, Ltd., 725
French Nuclear Developments, Commissariat à l'Energie Atomique, 853
Frequency Spectrum of Calder Hall Reactor Noise, J. D. Cummins, (Report, 70)
Fuel Elements for Nuclear Reactors, (Patent, 486)
Gas-Cooled Nuclear Reactors, (Patent 413)
General Purpose Two Channel Coincidence Unit: A.E.R.E. Type No. 2013A, F. H. Wells, G. L. Godfrey and A. K. Barlow, (Report, 806)
"Hector" Research Reactor, Atomic Energy Establishment, Winfrith, 472
High-Power Particle Accelerator, Radiation Dynamics, Incorporated, 692
Inaugural Dinner, Institution of Nuclear Engineers, 601
Inauguration of Mol Nuclear Fuel Processing Plant, 162
Inspection of Pressure Plant for Land-Based Nuclear Installations, Lloyd's Register of Shipping, 903
Karlsruhe Nuclear Research Centre, 369

Kinetic Experiment on Water Boilers, Atomics International, 571
Leak Detection with Radio-Isotopes, U.K.A.E.A. Wantage Research Laboratory, 438
Linear Electron Accelerator 100 MeV for the N.B.S. High Voltage Engineering Corporation, 519
Lloyds' Rules for Nuclear Ships, Lloyds' Register of Shipping, (Leading Article, 224)
Modifications to "Gleep" Research Reactor at Harwell, United Kingdom Atomic Energy Authority, 247
Monitor for Recording Radio-Activity in Water, Elliott-Automation, Ltd., 806
"Nuclear Clean" Valves, Cockburns, Ltd., 1064
Clean" Workshop, Stewarts and Lloyds, Ltd., 799
Clean" Workshop at Erith, General Electric Company, Ltd., 675
Energy Turbine, (Patent, 297)
Power Progress in Britain, United Kingdom Atomic Energy Authority, 144, 171
Power Prospects in Australia, W. H. Spooner, 272
Power Station Sites in Anglesey, Central Electricity Generating Board, 281, 1023
Power Station 360MW(e) in California, Southern California Edison Company, 126
Powered Submarine "Dreadnought", 730
Reactor Space Electric Power Units, 384
Reactor Stability, A. Hitchcock, (Review, 105)
Reactors, (Patent, 334)
Remote Handling Equipment, Nuclear Equipment, Ltd., 1010
Oldbury Nuclear Power Station, Central Electricity Generating Board, 728
Plutonium-in-Air Monitor, Atomic Weapons Research Establishment, 320
Power Rise for "Dido" Research Reactor, 1114
Powerful Linear Accelerator for Radiographic Inspection, A. O. Smith Corporation, 1072
Progress at Hunterston Nuclear Power Station, 246, 555
at Winfrith Atomic Energy Establishment, 490
Prolongation of Halden Reactor Project, 610
Proposed Sites for South Coast Nuclear Power Stations, 1059
Radio-Frequency Liner for Particle Accelerator, National Institute for Research in Nuclear Science, 235
Radioactive Isotopes from C.E.G.B. Reactors?, Electricity (Amendment) Bill, (Leading Article, 823)
Radioactivity of the Atmosphere near Ground Level Due to Distant Nuclear Test Explosions, (Report, 152)
Regulations for Nuclear Installations, 247
Research and Isotopes Production Reactor Goes Critical, 288
Reactor "Diorit" Critical, Reaktor A.G., 409
Resonance Integral Calculations for High-Temperature Reactors, J. P. H. Blake, (Report, 213)
Rig for Testing Lubricants under Gamma Irradiation, Mobile Oil Company, 639
Second Reactor for Karlsruhe, 951
Sensitive Direct-Reading Pocket Size Gamma Dosimeter, J. H. Howes, (Report, 213)
Sizewell Nuclear Power Station, English Electric, Babcock and Wilcox, Taylor Woodrow Atomic Power Group, 936
Solid State Physics Division, Harwell, Atomic Energy Research Establishment, 562
Special Power Excursion Reactor Test in Idaho, U.S. Atomic Energy Commission National Reactor Testing Station, 163
Thermal Cycling Rigs for Nuclear Reactor Fuel Elements, J. R. Linge, 1093
"ZEBRA": Zero Energy Breeder Reactor Assembly, United Kingdom Atomic Energy Authority, 74

Nucleate Boiling at Saturation Temperature, Analogy Between the Bubbling of Air into Water and, G. B. Wallis, (Report, 8)
Null Indicator, Electrical, Honeywell Controls Ltd., 250
Numerical Control, 777
Contouring System, Bendix Corporation, 915
Tape Control, "Probomat" System of, Warner and Swasey Company, 819
Nut, Ball, and Screw Units, Recirculating, Precision Gear Machines and Tools, Ltd., 1059

O

OBITUARIES

Atkinson, R. M., 891
Bruce-Garder, Sir Charles, 586
Ferguson, Harry, 755
Martin, W. G., 357
Thornycroft, Sir John Edward, 931
Verulam, Lord, 671
Weir, Sir Cecil, 755
Wimperis, H. E., 141

Occupational Hygiene Service, Slough, Slough Industrial Health Service, 473
Office Building, London, New, English Electric Group, 401
Oil, Air Content of, New Instruments for Measuring the, A. T. J. Hayward, (Report, 1058)
Bubbly, Methods of Measuring the Bubble Content of, A. T. J. Hayward, (Report, 1058)
Consumption in Great Britain, Petroleum Information Bureau, 440, 988
Fuel, Combustion Research, Experimental Boiler for, K. J. MacKenzie, W. O. A. Morton, G. F. J. Murray, W. V. P. Ferguson, 548
Fuel Injection in Blast-Furnaces, Société des Acieries de Pompey, 909
Heavy Fuel, Burning of, Urquhart's (1926), Ltd., 1025
Hydraulic System for Tunnelling Shields, Canada Iron Foundries, Ltd., 750
Industry, United Kingdom, V. S. Swaminathan, 866
Industry, World, British Petroleum Company Ltd., 282
Insulated 25kV Switchboard for Feeder Stations, Switchgear and Cowans, Ltd., 624
Level in Inaccessible Engines, Device for Maintaining, Equipment and Engineering Company, Ltd., 600
Pollution from Electroplating Wastes and, Water Pollution Research Laboratory, 892, 922
Production in Iraq, Basrah and Mosul Petroleum Companies Ltd.,
Production in 1959, Iranian, 565
Refinery, Milford Haven, Esso Petroleum Company, Ltd., 828
Refinery at Milford Haven, Opening of, Esso Petroleum Company, Ltd., 805
Search in Nigeria, Shell-BP Petroleum Development Company, 563
Service Headquarters at Feltham, Esso Petroleum Company, Ltd., 205
Tanker Fitted with Stabilisers, Ateliers et Chantiers de France, 902
Tankers, (Patent, 654)
Terminal at Tranmere, Shell Refining Company, Ltd., and Mersey Docks and Harbour Board, 69, 160

Oiling Device, Strip, Clark's Press Equipment, Ltd., 1064
Oils, Crude, Pumpability of Waxy, V. S. Swaminathan, 280
Oldbury Nuclear Power Station, Central Electricity Generating Board, 728

ONE HUNDRED YEARS AGO

Dublin and Holyhead Steamers, 617
Electric Telegraph, The, 657
Electrical Telegraph at Oldham, The, 1076
Engine for Common Roads, 1001
Engineers in Scotland, 961
First Subway for Water and Gas Pipes in London, 525
Fisher's Washing Machines, 381
"Haines" Improved Leather Driving Strap, 745
Launch of the "Sentinel", 577
New Motive Power—Lenoir's Gas Engines, 697
Notes from New South Wales, 131
Opening of the Birkenhead Street Railway, 417
Oxygen, 1040
Photographic Reproduction of MSS, 921
Picking Ore by Electro-Magnetism, 785
Progress of the Metropolitan Railway, 301
Railway Across the Channel, A, 3
"Repulsion", 170
Royal Agricultural Society, The, 91
Skinning Metropolitan Buildings, 865
Something New, 489
South Kensington Museum, 453
State of the Thames, 51
Traffic of London, The, 224
Transatlantic Air Ships, 337
Victoria Station and Pimlico Railway, 265

Opaque Liquids, Flow Indicators for, Sir W. H. Bailey and Co., Ltd., 1061
Open Coil Processes of Annealing and Gas Alloying, Lee Wilson Engineering Company, 611, 650
Opening of the Birkenhead Street Railway, 1860, 417
Openside Boring and Drilling Machine, American Tool Works Company, 857
Operating Circuits for Electric Discharge Lamps, (Patent, 221)
Operation "Cleansweep", National Industrial Safety Week, (Leading Article, 488)
Operational Research, Industrial Training in, British Iron and Steel Research Association, 115
Research, Second International Conference on, International Federation of Operational Research Societies, 648
Optical Depth Control for Horizontal Boring Machines, H. W. Kearns and Co., Ltd., 765
Maser Used in Communication Experiments, Bell Telephone Laboratories, 1035
Suspension Alignment Calibration, V. L. Churchill, 600
Ore Line, Heavy Locomotive for, ASEA, 952
Picking, by Electro-Magnetism, 785
"Oriana", P. & O. - Orient Liner, 962
Origin and Destination Survey for London, Value of an, (Leading Article, 51)
Oscillating Device, Hydraulically Driven Automatic, Hydraulic Machinery Drives Ltd., 321
Oscillator, Low-Distortion Transistor, Solartron Laboratory Instruments, Ltd., 939
Frequency-Modulated, (Patent, 298)
Oscillograph Cathode Ray, Seven-Tube, with Automatic Development of the Recording Paper, 773
Recorder, Direct-Writing, Savage and Parsons Limited, 321
Output and Dewpoint Tests on Air Compressor Plant, Lacy-Hulbert and Co., Ltd., 1016
Outriggers, Crane, Wheeled Carriages for, Steels Engineering Products, Ltd., 847
Overhead Crane Wheel Flange Lubrication, Acheson Colloids, Ltd., 850
Electrification Systems for Railways, (Patent, 221)
Equipment Components, British Insulated Callender's Cables, Ltd., 624
Travelling Cranes, Electric, K. E. Booth and W. S. Cartwright, 789
Overload Protection for Lifts, (Patent, 297)
Slip Clutch, (Patent, 821)
Overseas Better Trained Than Home Graduates?, (Leading Article, 783)
Construction Work, Board of Trade, 442
Earnings, 851
Port Construction, Consultants and, (Leading Article, 2)
Students in Britain, London Conference on Overseas Students, 680
Trade, Board of Trade, 42, 252, 404, 605, 733, 949
Oxidation of Steel by Carbon Dioxide, Society of Chemical Industry, Corrosion Group, 27
Oxygen, 1860, 1040
Pipe Network, 162

P

Packaged Weatherproof Switching Station, English Electric Company, Ltd., 904
Packaging Material, Self-Adhesive, Spicers, Ltd., 630
Packer, High-Speed Bag, Thomas Robinson and Son Ltd., 643
Packet Sealing, Food, Cooling Air for, Kellogg Company, 282
Paddle Steamer, Last Southampton, Wm. C. Budd, (Letter, 193); J. H. Jellett, (Letters, 25, 428)
Steamer Preservation, S. Roberts, (Letter, 503)
Pallet Tippler, Massey-Ferguson, Ltd., 71
Pan Mixer for Concrete, Blaw Knox, Ltd., 510
Panel Meters, Semi-Flush, Salford Electrical Instruments, Ltd., 78
Pantograph Carbons, "Morganite", The Morgan Crucible Company, Ltd., 624
Current Collection Studies, British Insulated Callender's Cables Group, 679
Paper Mill, Industrial Turntable in, J. W. Marshall & Co. Ltd., and Bolton Turntable Company Limited, 365
Parallel Plug Rotary Valves, Peckett and Sons Limited, 402
Parametric Amplifier, Tube Unit, Electron Beam, 456
Park, Car, Mechanised, Myton, Ltd., 683
Lane Improvement Scheme, Progress of the, 698; R. Edmonds, (Letter, 838)
Parking, Car, the Problem of, Institution of Municipal Engineers, 113
the Control of, Institution of Civil Engineers, Traffic Engineering Study Group, 1051
Particle Accelerator, High-Power, Radiation Dynamics Incorporated, 692
Accelerator, Radio-Frequency Liner for, National Institute for Research in Nuclear Science, 235
Board Factory, Tyne Board Company, Ltd., 106
Party-Lines in Automatic Telephone Systems, (Patent, 87)
Pass Design, Roll, United Steel Companies Ltd., (Review, 466)
Passenger and Car Ferry "Egnatia", Societe des Chantiers Reunis Loire-Normandie, 610
Ferry, "Woodchurch", Mersey, Philips and Son, Ltd., 41
Transport, London, 271
Patrol and Survey Launch, Aluminium Alloy, Universal Shipyards, (Solent) Ltd., 41
Pavement, Moving, or "Trav-o-lator" for Railway Passengers, 585
Pavings, Traffic Bearing Structures, (B.S.I., 48)
Pay Agreement, Railway, 324
Claim, Railway Shopmen's, 566, 605, 644
Pedal Force, Measurement of, Robert Bosch G.m.b.H., 910
Peltier Effect, Demonstrating the, 1116
Permanent Magnet Chuck, Darwins, Ltd., 902
Perth, Queen's Bridge, 683
Petrol Engines, Investigation of Cut-Off and Throttle Governing of, Mahmoud Hassaan Shadawi, 1083
Petroleum Gas for Engines, Liquefied, Calor Gas (Distributing) Company, Ltd., 565
Industry, Corrosion Problems in the, Society of Chemical Industry, Corrosion Group, 391
Peugeot "404", 720
Pharmaceutical Plant at Hoddesdon, Merck, Sharp and Dohme, Ltd., 152
Photocells, Cadmium Sulphide, as Radiation Monitors, A.E.I., Radio and Electronic Components Division, 75
Photoelectric Autocollimator, Hilger and Watts, Ltd., 63
Micrometer Microscope, Hilger and Watts, Ltd., 63
Photographic Reproduction of MSS, 1860, 921
Photovoltaic Light Sensors, Texas Instruments, Ltd., 850
Physical and Chemical Examination of Water, Approved Methods for the, Institution of Water Engineers, (Review 393)
Physics Division, Solid State, Harwell, Atomic Energy Research Establishment, 562
Picking Ore by Electro-Magnetism, 1860, 785
Pictures, X-ray, Rapid Development of, Rank-Xerox, Ltd., 727
Piezo-electric Crystal Units, (Patent, 693)
Ignition Switch, Trojan, Ltd., 973
Pile Drivers, Diesel Ram for, (Patent, 378)
Piles, Production of Concrete, (Patent, 653)
Pilot's Information Display, Royal Aircraft Establishment, 1062
Pinch Pyramid Plate Bending Rolls, Bronx Engineering Company, Ltd., 942
Pipe Coupling, Plastic, Hozelock, Ltd., 1064
Joints, Threaded, Sealing Tape for, William Rose, Ltd., 982
Network, Oxygen, 162
System, Reinforced Plastic, Bristol Aeroplane Plastics, Ltd., 1017
Pipeline in Operation, Rotterdam-Rhine, N.V. Rotterdam-Rijn Pijpleiding Maatschappij, 122
Pipelines, Identification of, (B.S.I., 1050)
Pipes, Couplings for, (Patent, 653)
Flexible Couplings for, Aero Controls Ltd., 457
Glass - Fibre - Reinforced Concrete, Sharp, Jones & Co. Limited, 361
Piston Clamp, Ratchet, Speed Tools, Ltd., 948
Controlled Port, Experiments on, R. S. Benson, 875
and Piston-Ring Assemblies, (Patent, 917)
Ring, Reducing Groove Wear, (Patent, 167)
Pit Props, Hydraulic, for Temporary Floor Strengthening, Dowty Mining Equipment, Ltd., 1113
Plain Bearing, Heavily Loaded, Testing, O. Holfelder, 504
Plan, Five Year, India's Third, 288
Plane Milling Machine, Kendall and Gent, Ltd., 61
Planer Type Milling Machine, G. A. Gray Company, 859
Planing Machine with Contactless Control of the Table Drive, Brown, Boveri & Cie, 774
Planking, Aluminium, for the Construction of Truck Bodies, British Aluminium Company, 596
Planned Economy, First Decade of India's, 288
Planning, City Centres, an Engineer's View of, R. Nicholas, 151
and the Motor Vehicle, Town and Country Planning Association, 724
Plasma and Astrophysics Research, National Bureau of Standards, 994
Plasmas in Electrical Engineering, High Energy, J. J. Matthews, 306
Plastering Machine, Wall, Millars' Machinery, Ltd., 834
Plastic Cylinder for Television Aerial, Self-Supporting, Siemens and Halske Akiengesellschaft, 952
Pipe Coupling, Hozelock, Ltd., 1064
Pipe System, Reinforced, Bristol Aeroplane Plastics, Ltd., 1017
Plastic Coating, Steel Sheets with All-over, Dorman Long and Co., Ltd., 984
Factory at Rotterdam, Projected, N.V. Rotterdamse Polyolefinen Maatschappij, 610
in Industry Exhibition at Leningrad, I.C.I. Plastics Division, 122
Reinforced, Second International Reinforced Plastics Conference, (Leading Article, 960)
Plate Bending Rolls, Pinch Pyramid, Bronx Engineering Company, Ltd., 942
Lifting Machine, Mobile, Thos. Adshead and Son, Ltd., 211
Plating of Cylinder, Liners, Hard Chrome, Laystall Cromard, Ltd., 604
on Die Castings, Better, British Non-Ferrous Metals Research Association, 236
"Ploughrator", William Hooton, Ltd., 72
Plug, Co-Axial, (Patent, 917)
Connectors, Electrical, (Patent, 1121)
for a Puncture in a Tubeless Tyre, Apaseal, Ltd., 720
and-Socket Connectors, Belling and Lee, Ltd., 564
Plugging Device Tube, (Patent, 957)
Plugs, Wall, Grippo Products Ltd., 284
Plunger Pump, Axial Multiple, Swiss Locomotive Machine Works (SLM), 409
Plutonium-in-Air Monitor, Atomic Weapons Research Establishment, 320
Pneumatic Conveying Equipment, Mobile, F. E. Callow (Engineers), Ltd., 1062
Hydraulic Machine Tool Control System, Moog Servocontrols, 954
Platform, European Organisation for Nuclear Research (CERN), 992
Rms, Control for, T.A.L. Numatics, Ltd., 155
Sawing or Filing Tool, Consolidated Pneumatic Tool Company, Ltd., 947
and Spring Suspensions for Railway Vehicles, (Patent, 1073)
Tyred Compaction Rollers, Armstrong Whitworth (Metal Industries) Ltd., 432
Pneumoconiosis Survey, Council of Ironfoundry Associations, 159
Point-to-Point Positioning Control System, Sperry Gyroscope Company, 915
"Polaris" Missile, (Leading Article, 488)
"Polaris" Missle, Pros and Cons of the, (Leading Article, 961)
Polarograph, Industrial and Research, Evershed and Vignoles, Ltd., 848
Poldhu Radio Site for National Trust, 110
Polluted Lakes, New Life for, Industriforbundets Vattenvardsbyra, 372
Pollution, Atmospheric, 390
from Electroplating Wastes and from Oil, Water Pollution Research Laboratory, 892, 922
Water, and Industrial Tips, 502
Water, Research in 1959, Water Pollution Research Laboratory, 36
Poly-Propylene in Production, Imperial Chemical Industries, Ltd., 933
Pontoon Ferries, Self-Propelled, Saro (Anglesey) Ltd., 510
Port, Piston Controlled, Experiments on, R. S. Benson, 875
Portable Belt Conveyor, Numec Limited, 283
Cranes, Improvements in or Relating to, (Patent, 1073)
Position Indicator, Crash, (Patent, 861)
Selector Unit, Rotary, Plessey Company, Ltd., 363
Positional Control Apparatus, Electrical, (Patent, 414)
Positioning Control System, Point-to-Point, Sperry Gyroscope Company, 915
Post Office Research at Dollis Hill, 592
Office Telecommunications Services, 902

Postal Services, Engineering for, Manufacturers of British Postal Equipment, 42
Potable Water Supply in Sealed Vehicles, General Electric Space Sciences Laboratory, 46
Potato Digger, Swing-Sieve, M. B. Wild and Co. Ltd., 71
Harvesters, Massey-Ferguson, Ltd., 71
Powder Metallurgy, 1111
Power Cable, Cross-Channel, Associated Electrical Industries, Ltd., and British Insulated Callender's Cables, Ltd., 154
Conversion and Propulsion Systems, Astronautical, 257
Engineering Development and Research in the U.S.S.R., 502
Generation, Electric, New Methods of, Westinghouse Electric Corporation, 84, 123
Link, Rectifier Transformers for Cross-Channel D.C., Fuller Electric, Ltd., 682
Plant Design, Evolution of Nuclear, Sir Christopher Hinton, 225
Presses, (Patent, 521)
Project, the Rance Tidal, J. H. M. Sykes, 689
Plant Prospects, Britain's Nuclear, Royal Society, (Leading Article, 129)
Rectifiers, Germanium and Silicon, J. C. Read, 533; D. B. Corbyn, (Letter, 669); D. R. Coleman, (Letter, 838)
Station, Blyth "A", Central Electricity Generating Board, North Eastern Division, 28
Station Buildings, Heating of, Central Electricity Generating Board, 433
Station, Drakelow-C, Supercritical Generating Units for, Central Electricity Board, 313
Station, Kincardine, South of Scotland Electricity Board, 618
Station, Korneburg, 815
Station, Margam "B", The Steel Company of Wales, Ltd., 101
Station, Nuclear, for Anglesey, Central Electricity Generating Board, 1023
Station, Nuclear, at Bradwell, Charge-Discharge Machines, Strachen and Henshaw, Ltd., 804
Station, Nuclear, Dungeness, Central Electricity Generating Board, 153
Station, Nuclear, Hunterston, Progress on, Simon-Carves Atomic Energy Group, 555
Station, Nuclear, Oldbury, Central Electricity Generating Board, 728
Station, Nuclear, 360MW(e), in California, Southern California Edison Company, 126
Station Programmes, Coal Fired, 36
Station, Progress at Hunterston, Nuclear, 246
Station, Sizewell Nuclear, English Electric, Babcock and Wilcox, Taylor Woodrow Atomic Power Group, 936
Station at Tilbury, Second, 808
Transmission, Variable-Speed, Automatic Control of Vehicle, (Patent, 262)
Stations, Nuclear, South Coast, Proposed Sites for, 1059
Units, Space Electric, Nuclear Reactor, 384
Practical Training for Engineers, R. Dobson, (Letter, 714)
Precision Boring Machine, Fosdick Machine Tool Company, 856
Grinding Machines, Matchless Machines Ltd., 56
Preservation, Paddle Steamer, S. Roberts, (Letter, 503)
Press Brake, Hydraulic, 24ft. Long, Cincinnati Shaper Co., Cincinnati, 778
Double Action 750-ton, Wilkins and Mitchell, Ltd., 58
Drawing, with Compound Crank Drive, 250-tonne, Fried Krupp Maschinenfabriken, 569
Downstroking Hydraulic Barnes, George Cohen Sons & Co. Ltd., 13
14,000 ton Extrusion in Indiana, Aluminium Company of America, 572
Mechanical, with Automatic Slide Positioner, Danly Machine Specialities, Inc., 778
100-ton Wide Ram, B. and S. Massey, Ltd., 22
3,000-tonne, 8-Station Transfer, Eumuco Aktiengesellschaft für Maschinenbau, 568
Transfer, of 160 tons Capacity, Pearson Panke, Ltd., 16
Two-Part Single Action British Clearing, Rockwell Machine Tool Company, Ltd., 17
Presses, (Patent, 917)
Feed Attachment for, Catmur Machine Tool Corporation, Ltd., 58
Heavy-Duty, Danly Machine Specialities, Inc., 114
Hydraulic, Rhodes Gill & Co. Ltd., 212
Power, (Patent, 521)
Prestressed Arch Dam, Tourtemagnes, 4
Concrete, Fourth International Congress on, 1116
Concrete, Standardised Bridge Beams in, Cement and Concrete Association Prestressed Concrete Development Group, 507
Pressure Plant for Land-Based Nuclear Installations, Inspection of, Lloyd's Register of Shipping, 903
and Vacuum Gauges, Bourdon Tube, (B.S.I. 48)
Vessel, Nuclear Reactor Design of Reinforced Cylinder for, R. W. Lakin and S. S. Gill, 495
Vessel Research Towards Better Design, Symposium on, British Welding Research Association, 1061
Prices, Coal, National Coal Board, 512
Import and Export, Board of Trade, 286
Printer, Digital, Monitoring System with, Bailey Meters and Controls, Ltd., 810
Printing, Braille, Improved, Chambon (Park Royal), Ltd., 848
THE ENGINEER at Southend, Eden Fisher (Southend), Ltd., 602
Prize-giving Worth Reporting, W. H. Allen, (Leading Article, 865)
Probability and Statistical Inference for Engineers, C. Derman and M. Klein, (Review, 65)
"Probomat" System of Numerical Tape Control, Warner and Swasey Company, 819
Process Engineering Calculations: Material and Energy Balances, Mack Tyner, (Review, 241)
Production and Accounting System, "Z70" Centralised, Zuse K.G., 774
Boring Machine, Rockwell Machine Tool Company, Ltd., 16
Engineering, Board of Trade, 79, 252, 442
Engineering Show and Machine Tool Exposition at Chicago, 777, 818, 855, 911, 954
Lathe with Multi-Cut Cycling, Monarch Machine Tool Company, 296
Productivity in Computing, Associated Electrical Industries, Ltd., 111
in Heavy Engineering, High, A. G. Thompson, (Review, 428)
Professional Engineer, Engineers' Guild, 1027
Engineers' Earnings, Engineers' Guild, 965
Profile and Contour Milling Machine, Bridge Type, Cincinnati Milling Machine Company, 913
Programmed Fatigue Testing, Problems Involved in the Development of, T. R. G. Williams, and T. H. Hughes, 703
Programmes, Computer, Library of, Institution of Civil Engineers, 686
Progress in South African Mechanical Engineering Research, Mechanical Engineering Research, 1029
of the Metropolitan Railway, 1860, 301
Projection Apparatus, Micro, Carl Zeiss, 480
Prony Wedge Release Mechanism, Telescopic Friction, National Coal Board Central Engineering Establishment, 113
Propeller Shafts with Hooke's Joints, Rubber Coupling for, 598
Properties of Alloys, Engineering, 582
of Materials, Mechanical, A. C. Vivian, (Letter, 593)
of Nickel-Base Alloys, Engineering, 580
Propulsion and Power Conversion Systems, Astronautical, Goodrich-High Voltage Astronautics Incorporated, 257
Turbo-Electric, of S.S. "Canberra", A.E.I. Heavy Plant Division, 831
Protection of Gas Plant and Equipment from Corrosion, Corrosion Group of the Society of Chemical Industry, 670
of Gas Plant, Symposium on the, Institution of Gas Engineers, 364
Overload, for Lifts, (Patent, 297)
Protective Gloves, Industrial, (B.S.I., 48)
Public Health Bill, 851
Health and Civil Engineering, R. F. Pearson, (Leading Article, 696)
Works Exhibition, 797, 834
Pullman Trains, Diesel-Electric, British Railways, London Midland Region, 29
Pulsator, 20 ton Capacity, Suitable for Fatigue Tests on Structural Components, 1029
Pulse Code Modulation, Institution of Electrical Engineers, 796
Code Modulation Telephony, Standard Telecommunication Laboratories, Ltd., 1115
Generator, Single and Double, Solartron Laboratory Instruments, Ltd., 1065
Pumped Storage Scheme, Vianden, 326

PUMPS

Axial Multiple Plunger Pump, Swiss Locomotive and Machine Works (SLM), 409
Ballast Pump, De Laval Ljungström Turbine Company, 114
Compact Boiler Feed Turbopump, Pulsometer Engineering Company,
Compatible Pumps, Neumo, Ltd., 684
Diaphragm Pumps, (Patent, 573)
Portable Pumping Set, Lee, Howl & Co., Ltd., 1062
"Pumpability" of Waxy Crude Oils, V. S. Swaminathan, 280
Small Vacuum Pump Set, William Allday and Co., Ltd., 1025
Tractor-Driven Irrigation Pump, Arthur Lyon and Co. (Engineers). Ltd., 972
Using Centrifugal Pumps, E. Allen, (Review, 1053)

Punched Paper Tap Reader, English Electric Company, Ltd., 1115
Punching and Shearing Machine, Universal, Valdarno S.A., 993
Puncture in a Tubeless Tyre, Plug for a, Apaseal, Ltd., 720
Purer Metals, Johnson, Matthey and Co. Ltd., 401
Purification, Effluent in Germany, 81
Tannery Effluent, Atlas Copco Greece, 444
Purifying Coal Distillation Gases, (Patent, 297)
Pyramid Plate Bending Rolls, Pinch, Bronx Engineering Company, Ltd., 942
Pyrometer, Radiation, United Kingdom Atomic Energy Authority, 810

Q

Quarrel, How to Start a, (Leading Article, 381
Queen's Bridge, Perth, 683
Speech, 765
Quench Furnace, Small Closed, Electric Resistance Furnace Company, Ltd., 20, 811

R

Radar Equipment, Discharge Switching Devices for, (Patent, 262)
Secondary, 1115
Navigational Aids, Murphy Radio, Ltd., 511
Series, Marine, Improved, Decca Radar, Ltd., 802
Radial Drilling and Tapping Machine, A. Kitchen-D. Walker, Ltd., 942
Radiation Monitors, Cadmium Sulphide Photocells as, A.E.I. Radio and Electronic Components Division, 75
Pyrometer, United Kingdom Atomic Energy Authority, 810
Radio-Activity in Water, Monitor for Recording, Elliott-Automation, Ltd., 806
Convention on Space Research, British Institution of Radio Engineers, 400
and Electronic Engineers, Introduction to Laplace Transforms for, W. D. Day, (Review, 839)
Equipment for Aircraft, Anti-Collision, (Patent, 449)
Frequency Liner for Particle Accelerator, National Institute for Research in Nuclear Science, 235
Links, and Local Broadcasting, Pye Limited, 362
Mobile, Committee Report, 681
Research Report, Radio Research Board, 562
Research, Superconductivity and, General Electric, 996
Show, 1960, National Radio and Television Exhibition, 362
Site Poldhu for National Trust, 110
Telescope 210ft., Construction for, Australian C.S.I.R.O., 289
Transistorised Single-Sideband, Redifon, Ltd., 905
Transmitter V.L.F. Wood Laminate Supports in a, Permali, Ltd., 681
Radioactive Isotopes from C.E.G.B. Reactors?, Electricity (Amendment) Bill, (Leading Article, 823)
Waste, Disposal of, 647
Radioactivity of the Atmosphere Near Ground Level Due to Distant Nuclear Test Explosions, (Report, 152)
Radiographic Inspection, Powerful Linear Accelerator for, A. O. Smith Corporation, 1072
Radio-Isotopes, Leak Detection, U.K.A.E.A. Wantage Research Laboratory, 438

RAILWAY GENERAL MATTERS

Aluminium Alloys in Railway Rolling Stock, T. Henry Turner, 26
in Rolling Stock Exhibition, Centre International de Developpement de l'Aluminium, 44, 117
Anniversary of German Railways, 125th, 1117
Automatic Warning System in Southern Region, 902
Bogies for Rail Vehicles, (Patent, 573)
British Steam Locomotive Since 1900, W. A. Tuplin, (Letter, 890)
Change at Crewe, (Review, 891)
Diamond Jubilee of the Central Line, London Transport, 281
Diesel-Electric Pullman Trains, British Railways, London Midland Region, 29
Railway Breakdown Crane, 250-ton, Cowans Sheldon and Co. Ltd., 753
District Line Resignalling, London Transport, 563
Electronic Railway-Signal Interlocking, Mullard Equipment, Ltd., 1022
Harlow Town Station, British Railways, 155
Hundred Years of Railway Carriages and Wagons, Gloucester Railway Carriage and Wagon Company Ltd., 282
Main Lines Across the Border, O. S. Nock, (Review, 64)
Modernisation: Rail, Road or Both, (Leading Article, 743); R. G. Jarvis, (Letter, 890); T. I. Lloyd, (Letter, 1018)
Motors for A.C. Locomotives, Associated Electrical Industries, Ltd., 213
Moving Pavement or "Trav-o-lator" for Railway Passengers, 585
New London Transport Underground Trains, Cravens, Ltd., 844
Opening of the Trav-o-lators at Bank Station, Otis Elevator Company, Ltd., 563
Passenger Transport Services Compared, T. I. Lloyd, (Letter, 276)
Pneumatic and Spring Suspensions for Railway Vehicles, (Patent, 1073)
Rail-Fastening Means, (Patent, 781)
Rail Vehicles, (Patents, 222, 1121)
Railway Accidents, 659
Across the Channel, 1860, 3
Conversion Scheme on the Welsh Border, 984
Freight Impasse, (Leading Article, 264)
Pay Agreement, 324
Shopmen's Pay Claim, 566, 605, 644
Track-Circuits, (Patent, 1073)
Wages, 42
Wheel Lathe, Craven Brothers (Manchester), Ltd., 906
Re-Railing Equipment, Frieseke and Hoepfner G.m.b.H., 690
Riou Bourdou Railway Viaduct, 817
Siding Allocation by Programme, London Transport District Line, 727
Thousands of Millions to be Saved, Railway Conversion League, (Leading Article, 744); I. G. Moore, (Letter, 800); Roy G. De Bray, (Letter, 838); T. I. Lloyd, (Letters, 890, 974); I. G. Moore, A. I. Watkinson, (Letter, 934); M. J. Douglass, (Letter, 1018); W. D. Mitchell, (Letter, 1052)
Train Speed Control and Cab Signalling Equipment, (Patent, 450)
Transport and the Weather, T. I. Lloyd, (Letter, 838)
Underfloor Wheel Lathe for Railway Vehicles, Wilhelm Hegenscheidt K.G., 687
Wagon Handling, (Patent, 613)

RAILWAY ELECTRIFICATION

Alternating Current Electric Traction Equipments, (Patent, 261)
Back to Steam in Glasgow, (Leading Article, 1040)
British Railways Electrification Conference, 587, 621
Circuit Arrangements for Series-Wound Motors, (Patent, 1073)
Control System for Electrically Propelled Vehicles, (Patent, 413)
Electric Traction Development, (Leading Article, 575)
Electrification Conference Banquet, 640
Electrifying the Hard Way, (Leading Article, 744)
Equipment for Railway Electrification, British Railways Electrification Conference, 560, 590, 624
First British 25kV Main Line Electrification, London Midland Region, British Railways, 461, 499
Glasgow Suburban Railway Electrification, 763
Kent Coast Electric Services, 1114
Locomotive, A.C., with Rheostatic Braking, Associated Electrical Industries, Ltd., 732
London Transport Chesham Branch Electrified, 475
More Railway "Teething Troubles", (Leading Article, 1000)
Multiple-Unit Trains for Suburban Electrification, British Railways, Eastern Region, 667
North-East London Railway Electrification, 895
Notchless Control and Silicon Rectifiers in Motor Coach, English Electric Company, Ltd., 601
Overhead Electrification Systems for Railways, (Patent, 221)
Pantograph Current Collection Studies, British Insulated Callender's Cables Group, 679
Railway Chaos, M. W. Burnby, (Letter, 891); A. J. Field, (Letter, 974)
Electrification, British Electrical and Allied Manufacturers' Association, 1114
Electrification Cable, British Insulated Callender's Cables Group, 905
Electrification Changeover, Eastern Region, British Railways, 803
Rheostatic Braking, Institution of Locomotive Engineers, 1024
Silicon Rectifiers in Main Line Service, French National Railways, 292
Smoothing the Way, (Leading Article, 416)
Widening for Kent Coast Electrification, British Railways, Southern Region, 63

Raking Machine for Discharging 120 tons of Sugar Beet per Hour, Model of, Skoda Works, 689
Rams, Pneumatic, Control for, T.A.L. Numatics, Ltd., 155
Rance Tidal Power Project, J. H. M. Sykes, 689
Rangefinder, Binocular, National Research Development Corporation, 684
Ratchet Piston Clamp, Speed Tools, Ltd., 948
Rate Relief, Mechanicals Get No, Institution of Mechanical Engineers, 919
Rating Bill, New, and Industry, P. G. Marson, 1111
and Valuation, Federation of British Industries, 907, 988
Reactor Advanced Gas-Cooled, at Windscale, 160
Assembly, Breeder, Zero Energy, "ZEBRA", United Kingdom Atomic Energy Authority, 74
Fast, Dounreay, Institution of Mechanical Engineers, 978, 1011, 1046, 1105
Flux Noise, Record Replay System for the Harmonic Analysis of Nuclear, J. A. J. Lawrence and E. R. Curran, (Report, 70)
Fuel Elements, Nuclear, Thermal Cycling Rigs for, J. R. Linge, 1093
at Harwell, Modifications to "Gleep" Research, United Kingdom Atomic Energy Authority, 247
High-Temperature, "Dragon", O.E.E.C. High-Temperature Reactor Project, 302, 338
for Karlsruhe, Second, 951
Noise, Frequency Spectrum of Calder Hall, J. D. Cummins, (Report, 70)
Pressure Vessel, Design of Reinforced Cylinder for Nuclear, R. W. Lakin and S. S. Gill, 495
Project Halden Prolongation of, 610
Research, "Dido", Power Rise for, 1114
Research, "Diorit" Critical, Reaktor A.G., 409
Research, "Hector", Atomic Energy Establishment, Winfrith, 472
Research and Isotopes Production, Goes Critical, 288
Space Electric Power Units, Nuclear, 384
Stability, Nuclear, A. Hitchcock, (Review, 105)
Test, Special Power Excursion, in Idaho, U.S. Atomic Energy Commission National Reactor Testing Station, 163
Reactors, C.E.G.B., Radioactive Isotopes from?, Electricity (Amendment) Bill, (Leading Article, 823)
Fuel Elements for Nuclear, (Patent, 486)
Gas-Cooled Nuclear, (Patent, 413)
Nuclear, (Patent, 334)
Resonance Integral Calculations for High-Temperature, J. P. H. Blake, (Report, 213)
on Urban Sites, Low-Powered Research, 807
Reading Automaton, Electronic, Solartron Electronic Group, Ltd., 970
Ready-Mixed Concrete Plant at Fulham, Greenham Ready Mixed Concrete, Ltd., 40
Rear Axle Housing, Transfer Machining of Tractor, Cross Company, 165
Re-Boring and Trepanning Lathe, Heavy, Wagner and Co., 609
Rebuilding City Centres, (Leading Article, 130)

Receivers, Television, Mechanised Assembly of, General Electric Company Ltd., 203
Recirculating Ball Nut and Screw Units, Precision Gear Machines and Tools, Ltd., 1059
Record Replay System for the Harmonic Analysis of Nuclear Reactor Flux Noise, J. A. J. Lawrence and E. R. Curran, (Report, 70)
Recorder, Adaptable Multi-Point, Honeywell Controls, Ltd., 1060
Recorders, Chart, Integrator for, Honeywell Controls, Ltd., 323
Recording and Invoice System, Shell-Mex and B.P. Ltd., 674
Recordings, Electronic Instrument for the Automatic Evaluation of, 772
Recovery and Recrystallisation, 582
Recruitment of Scientists and Engineers to Government Service, Civil Service Commissioners, (Leading Article, 616)
and Training, Federation of British Industries, 367
Recrystallisation and Recovery, 582
Rectifier Installations, (Patent, 861)
Silicon, for Aluminium Smelting, 6000kW. Westinghouse Electric Corporation and Aluminium Company of America, 571
Stacks, Semi-Conductor, (Patent, 127)
Transformer, Motor Coach, Brush Electrical Engineering Company, Ltd., 561
Transformers for Cross-Channel D.C. Power Link, Fuller Electric, Ltd., 682
Rectifiers, Power, Germanium and Silicon, J. C. Read, 553; D. B. Corbyn, (Letter, 669); D. R. Coleman, (Letter, 838)
Silicon, Westinghouse Brake and Signal Company, Ltd., 561
Silicon, in Main Line Service, French National Railways, 292
Silicon, and Notchless Control in Motor Coach, English Electric Company, Ltd., 601
Reducing Valves, Hymatic Engineering Company, Ltd., 809
Reduction of Iron Ore, Direct, Head Wrightson and Co. Ltd., 156
of Nickel Oxide, (Patent, 957)
Refinery, Dinslaken, BP Benzin und Petroleum A.G., 910
Oil, Milford Haven, Esso Petroleum Company, Ltd., 805, 828
Opened, Godorf, Deutsche Shell A.G., 517
Refining, Zone, and Allied Techniques, N. L. Parr, (Review, 142)
Refinishing, Vehicle, Lewis Berger (Great Britain) Ltd., 513
Refractometer, Immersion, Carl Zeiss, 480
Refractory Metals, Inert Atmosphere Processing Facility for, Universal-Cyclops Steel Corporation, 410
Refrigeration, Air Conditioning and Heating Equipment, Chrysler International, S.A., 245
Compressor, Model "CKD 4 VD 260A", 688
Controls, Harold H. Egginton, (Review, 715)
Reverse-Cycle, Chrysler International, Special Products Division, 941
Refuse Collector, Karrier Motors, Ltd., 799
Disposal Plant at Salford, Heenan and Froude, Ltd., 982
Reinforced Concrete Buildings, Examples of the Design of, C. E. Reynolds, (Review, 503)
Concrete, Durability of in Seawater, (Report, 759)
Cylinder for Nuclear Reactor Pressure Vessel, Design of, R. W. Lakin and S. S. Gill, 495
Plastic Pipe System, Bristol Aeroplane Plastics, Ltd., 1017
Plastics, Second International Reinforced Plastics Conference, (Leading Article, 960)
Reinforcement for Concrete, Reinforced Concrete Association's Committee Steel Supplies, 1027
Relay Construction, (Patent, 1121)
Definite-Time Earth Fault, English Electric Company, Ltd., 850
Relays, Thermal, Coventry Controls, Ltd., 634
Trip Circuit Supervision, English Electric Company, Ltd., 63
Re-location of Industry, City Council of Birmingham, 685
Remote Handling Equipment, Nuclear, Nuclear Equipment, Ltd., 1010
Supervisory Control System for Eastern Region Feeder Stations, Standard Telephones and Cables, Ltd., 591
Remuneration of Engineers, Engineers' Guild, (Leading Article, 960)
Reorganisation of the Nationalised Transport Undertakings, 1079
Repertorium und Ubungsbuch der Technischen Mechanik, Istvan Szabo, (Review, 714)
Report on Shipbuilding and Marine Engineering Industries, Department of Scientific and Industrial Research, (Leading Article, 1039)
Replay System for the Harmonic Analysis of Nuclear Reactor Flux Noise, Record, J. A. J. Lawrence and E. R. Curran, (Report, 70)
"Repulsion", 1860, 170
Re-Railing Equipment, Frieseke and Hoepfner G.m.b.H., 690
Research Activities, Review of, Advisory Council on Scientific Policy, (Leading Article, 575)
in Australia, Scientific, 807
in Coal-Mining, National Coal Board, Mining Research Establishment, (Leading Article, 1040)
D.S.I.R., Industrial Value of, Water Pollution Research Laboratory, 892, 922; G. F. Arkless, (Letter, 466)
and Design Conference, Machine Tool, First, Hugh Clausen, 629; (Leading Article, 576)
Design and Utilisation, Machine Tool, D. F. Galloway, 1081
and Development, Advisory Council on, 110
at Dollis Hill, Post Office, 592
Electricity Supply and, (Leading Article, 523)
Establishment, Mining, National Coal Board, 1057
Experimental Boiler for Fuel Oil Combustion, K. J. MacKenzie, W. O. A. Morton, G. F. J. Murray, W. V. P. Ferguson, 548
Fire, 1959, Fire Research Board, 473
Hydraulics, 1959, Hydraulics Research Board, 247
and Industrial Polarograph, Evershed and Vignoles, Ltd., 848
by Industry, Report on, (Leading Article, 335)
and Isotopes Production Reactor Goes Critical, 288
Keeping in Touch with Needs, British Welding Research Association, (Leading Article, 452)
Laboratory, London Transport, 983
Operational, Industrial Training in, British Iron and Steel Research Association, 115
Operational, Second International Conference on, International Federation of Operational Research Societies, 648
Programme, Fusion, Broadening the, United Kingdom Atomic Energy Authority, (Leading Article, 577)
Progress in South African Mechanical Engineering, Mechanical Engineering Research Unit, 1029
Reactor, "Dido", Power Rise for, 1114
Reactor, "Diorit", Critical, Reaktor A.G., 409
Reactor, "Hector", Atomic Energy Establishment, Winfrith, 472
Reactors on Urban Sites, Low-Powered, 807
Report, Radio, Radio Research Board, 562
Road, and the National Road Programme, (Leading Article, 523)
in Space, European, 1033
is the Yeast of Business, Scientific, C. E. K. Mees, (Leading Article, 380)
Reservation System, Electrically-operated, (Patent, 261)
Reservoir Embankment, Excavating the Cut-Off Trench for a, Thyssen Shaft Sinking Company, Ltd., 668
Selset, Tees Valley and Cleveland Water Board, 642
Tryweryn, Tarmac Civil Engineering, Ltd., 111
Resignalling, District Line, London Transport, 563
Resin-Glass Hull, Large Moulded, Halmatic Ltd., 363
Resistance Devices, Variable, (Patent, 47)
of Metal Sheet, Contact, Siemens-Schuckerwerke A.G., 952
Resistor Compositions, Du Pont de Nemours International, S.A., 1059
Resistors, High-Voltage, Welwyn Electric, Ltd., 767
Responsibility, Social, Industry and, 812
Retarder Installation, Hydrokinetic, Automotive Products Company Ltd., 598
Retirement, Acton Society Trust, 1027
Reverse-Cycle Refrigeration, Chrysler International Special Products Division, 941
Reversing Narrow Strip Rolling Mill, Low-Cost, Lowe Machine Manufacturing Company, 652
Reviews, Metallurgical, 671
Revision of E.R.A. Committee Structure, Electrical Research Association, 562
Revolutionary in Greece, Crib, (Leading Article, 657)
Rheostatic Braking, Institution of Locomotive Engineers, 1024
Riou Bourdou Railway Viaduct, 817
Riveted Joints, Tests on Eccentrically loaded, A. J. Francis and G. L. Belcher, 177

ROADS

Abnormal Loads by Road, (Leading Article, 300)
Automation on the Road, (Leading Article, 169)
Autostrada del Sole: Bologna—Florence, 406
Basic Road Statistics, British Road Federation, Ltd., 530
Birmingham-Preston Motorway Progress, John Laing and Son, Ltd., 768
By-Passes in Berkshire, 68
Competitive Design and the Road Problems, J. E. Dayton, 601
Completion of Maidstone By-Pass Motorway, 981
Concrete and Soil-Cement Roads, W. P. Andrews, (Review, 277)
Control of Parking, Institution of Civil Engineers, Traffic Engineering Study Group, 1051
County Surveyor on Roads, (Leading Article, 697)
Dual-Carriageway Lighting, (Patent, 450)
Electronic Control of Road Vehicles, L. E. Flory, 175
Expansion Joint for Bridge and Like Roadways, (Patent, 377)
Great Indispensible Clot, A, (Leading Article, 1076)
Instructions for Using the Portable Skid-Resistance Tester, (Report, 70)
Modernisation: Road, Rail or Both, (Leading Article, 743); R. G. Jarvis, (Letter, 890); T. I. Lloyd, (Letter, 1018)
Modest Increase in the Road Programme, 227
Modification of Two Motorway Schemes, 641
Motorways: Some Constructional Problems, H. Bowdler, 630
Passenger Transport Services Compared, T. I. Lloyd, (Letter, 276)
Planning and the Motor Vehicle, Town and Country Planning Association, 724
Pneumatic Tyred Compaction Rollers, Armstrong Whitworth (Metal Industries) Ltd., 432
Progress of the Park Lane Improvement Scheme, 698; R. Edmonds, (Letter, 838)
Proposed International Conference on Road Research, O.E.E.C., 158
Railway Conversion Scheme on the Welsh Border, 984
Right Road at the Right Place at the Right Time, (Leading Article, 695)
Road Accidents, "Callipides", (Letter, 631); David Whaley, (Letter, 890)
Accidents—B.S.S. 812—Methods of Testing Mineral Aggregates, H. N. Jenner, (Letter, 800)
Note No. 25, Sources of White and Coloured Aggregates in Great Britain, (1959), (Review, 195)
Research, 1959, D.S.I.R., 551
Research and the National Road Programme, (Leading Article, 523)
Surfaces, Seeing and Driving, J. M. Waldram, 594, 632; A. J. Field, (Letter, 758)
Roads and Their Traffic, Ernest Davis, (Review, 352)
Ross Motorway, 932; Stewart C. Black, (Letter, 1052)
Roundabouts and Traffic Signals, Institution of Civil Engineers, Traffic Engineering Study Group, 930; D. F. C. Vosper, (Letter, 1052)
Safety on the Roads, Arbeits und Forschungsgemeinschaft für Stadtverkehr und Verkehrssicherheit, 910
Sampling of Traffic, F. Garwood, 680
Self-Induced Ventilation of Road Tunnels, A. Ellis Hoult, (Letter, 25)
Stafford By-Pass, John Laing and Son, Ltd., 36
Stamford By-Pass, 767
Thousands of Millions to be Saved, Railway Conversion League, (Leading Article, 744); I. G. Moore, (Letter, 800); T. I. Lloyd, (Letters, 890, 974); Roy G. De Bray, (Letter, 838); I. G. Moore, A. I. Watkinson, (Letter, 934); M. J. Douglass, (Letter, 1018); W. D. Mitchell, (Letter, 1052)
Transport and the Weather, T. I. Lloyd, (Letter, 838)
Value of an Origin and Destination Survey for London, (Leading Article, 51)
of Road Improvements, Road Research Laboratory, (Leading Article, 337)

Roadster, "Lynx" 2/4 Seater, Lea-Francis Cars, Ltd., 672
Rock Drilling Equipment, Factory for the Production of, Sandvik Steelworks Company, Ltd., 1033
Drills, Portable Thruster Rig for, Holman Brothers (Proprietary), Ltd., 38
Tunnelling, "Ladder" Drilling for, Atlas Copco, Ltd., 947
Rocket Engine, Arc Jet, 30kW, Avco Corporation, 384
Engine Testing, Spadeadam Rocket Establishment, 431
Propellant Handbook, B. Kitt and D. S. Evered, (Review, 392)
Propulsion, Fundamentals of, R. E. Wiech, jr., and R. F. Strauss, (Review, 1053)
Rockets and Space Flight up to 1960, John E. Allen, 92, 132
Rogerstone, Aluminium Strip Mill, Expansion of Alcan Industries, Ltd., 635, 661
Roll Grinding Machines, Foundation for, P. H. Allaway, 457
Pass Design, United Steel Companies, Ltd. (Review, 466)
Rolled Sections and Built Girders, Geometric Properties of, Lloyd's Register of Shipping, (Review, 429)
Roller, Steam, Old, Preserved, 841
Tracks, Needle, Insley Industrial Supply Company, Ltd., 63
Rollers, Pneumatic Tyred Compaction, Armstrong Whitworth (Metal Industries) Ltd., 432
Rolling, Cold, Mill Expansion in New Jersey, Athenia Steel Division, National-Standard Company, 651
Stock and Wheel Pairs for Locomotives, (Dimensions), (B.S.I., 298)
Machine, Automobile Brake-Shoe, King's Heath Engineering Company, Ltd., 731
Machine, Horizontal All-Steel Section, F. J. Edwards, Ltd., 59
Mill, Low-Cost Reversing Narrow Strip, Lowe Machine Manufacturing Company, 652
Stock Exhibition, Aluminium in, Centre International de Developpment de l'Aluminium, 44, 117
Roll-Making Works, Extension to, Armstrong Whitworth (Metal Industries), Ltd., 1064
Roof for Stadium Grandstand, Aluminium, 254
Roofs, Multispan, Wind Forces on, J. D. Haddon, 536
Ross Motorway, 932; Stewart G. Black, (Letter, 1052)
Rotary Compressors, (Patent, 413)
Furnaces for Treating Molten Metal, Protecting the Lining of, (Patent, 414)
Hearth Furnace, Billet Handling Equipment for, Hymatic Engineering Company, 945
Isolator Installation, Hackbridge and Hewittic Electric Company, Ltd., 560
Table Surface Grinder, Selson Machine Tool Company, Ltd., 14
Valves, Parallel Plug, Peckett and Sons Ltd., 402
Vane Steering Gear, Brown Brothers and Co., Ltd., 565
Rotating Flap as a High-Lift Device, (Report, 8)
Wings, De-Icing, D. Napier and Son Ltd., 251
Rotors, (Patent, 333)
Rotterdam, Projected Plastics Factory at, N.V. Rotterdamse Polyolefinen Maatschappij, 610
Rhine Pipeline in Operation, N.V. Rotterdam-Rijn Pijpleiding Maatschappij, 122
Roundabouts and Traffic Signals, Institution of Civil Engineers, Traffic Engineering Study Group, 930; D. F. C. Vosper, (Letter, 1052)
Rover Trailer Winch, C. M. Hesford and Co., Ltd., 972
Royal Agricultural Society, The, 1860, 91
Navy, Electrical Engineering in the, Sir Hamish MacLaren, 626
Show, Machinery at the, 71
Society Tercentenary Address, Sir Cyril Hinshelwood, 140
Rubber Components, Vulcanised Butyl, (B.S.I., 88)
Compounds, Low Compression Set Butadiene Acrylonitrile Vulcanised, (B.S.I., 88)
Coupling for Propeller Shafts with Hooke's Joints, 598
Developments, Synthetic, International Synthetic Rubber Company, 438
Gloves for Electrical Purposes, (B.S.I., 48)
High Tensile, Seating Platform in, Vitafoam, Ltd., 597
Lubricant with Storage for Brush and Mop, Dispenser for, 720
New Ways With, 1067
Plant, Dutch, Royal Dutch/Shell Group, 517
Suspension, Toggle Link, Metalastik, Ltd., 597
Runcorn-Widnes Bridge, Progress of the, 149
Running-In of Internal Combustion Engines, (Patent, 298)
Runway, Elevated, Lighting Fittings, High-Intensity, (B.S.I., 88)
Rural Industries Exports, Rural Industries Bureau, 367
Industries Helping, Rural Industries Bureau (Leading Article, 336)
Russia, Another "First" in Space for, (Leading Article, 335)
Rust Removal, Allweather Paints, Ltd., 564

S

SAAB 96, Svenska Aeroplane Aktiebolaget, 719
Safety Officers for Contruction Sites, 812
Road, (Leading Article, 223)
on the Roads, Arbeits und Forschungsgemeinschaft für Stadtverkehr und Verkehrssicherheit, 910
Shower Handpiece, Siemens-Electrogeräte A.G., 517
Salford, Refuse Disposal Plant at, Heenan and Froude, Ltd., 982
Salient-Pole Synchronous Machines, Digital Computer Applied to the Design of, G. K. Ridley, 705
Sampler, Automatic Water, Elcontrol, Ltd., 905
Sampling of Traffic, the, F. Garwood, 680
Sand Moulds, (Patent, 522)
Sanders, Drum Abrasive Band, B. O. Morris, Ltd., 603
Sandwich Courses, Ministry of Education, 442
Sanitary Engineering, European Course in, Delft Technical University, 44
Satellite, "Echo", Signals via, 437
Programme "Discoverer", U.S.A.F. Ballistic Missile Division, 383
System for World-Wide Communications, Bell System, 518
X-ray Spectrometer for, Bristol Aircraft, Ltd., 849
Communication, Some Technical Aspects of, "Echo", 469
Communication, "Courier", 642
Satellites, and Communication, Meteorological, 384
Communications, Symposium on, British Interplanetary Society, 1067
Saving Water, How to Save Money by, City of Birmingham Water Department, 921
Saw, Band, Blades, (Patent, 334)
Tube, Sir James Farmer Norton and Co. Ltd., 511
Sawing or Filing Tool, Pneumatic, Consolidated Pneumatic Tool Company, Ltd., 947
Machine, Automatic, Karl Stolzer Maschinenfabrik, 569
Sawston, Stationery Factory at, Spicers, Ltd., 1059
Scaffolding Collapse, Analysis of, E. E. Hendriksen, 793
School, Summer, Anglo-American, on Industrial Archaeology, University of Manchester Extra-Mural (Extension) Department, 941
Schwab Memorial Lecture, the, Earle C. Smith, 570
Science Museum, Birmingham, Birmingham City Council, 729
Two Aspects of, Sir George Thomson, 394
Scientific Research is the Yeast of Business, C. E. K. Mees, (Leading Article, 380)
Scientist's Contributions to Mechanical Engineering, Owen A. Saunders, 760
and Engineers to Government Service, Recruitment of, Civil Service Commissioners, (Leading Article, 616)
Scotland, Industry in, Rootes Motors, Ltd., 605
and Midlands, Telephone Developments in, A.E.I. Telecommunications Division, 39
Natural Resources in, Scottish Council (Development and Industry), 438
Scooter, Hover, Rhoades Incorporated, 842
Scraper, Twin-Powered, Blackwood Hodge/Euclid, 835
Screening and Stockpiling Conveyor, Mobile, Michael and Partners, Ltd., 400
Screw and Ball Nut Units, Recirculating, Precision Gear Machines and Tools, Ltd., 1059
Design Air Compressor, Sir George Godfrey and Partners (Industrial), Ltd., 940
Screwthreads, Screwy, (Leading Article, 89); A. C. Hutchinson, (Letters, 193, 503, 1108)
Screw-Cutting Stationary Workpieces, (Patent, 917)

"Seacat", Short-Range Ship-to-Air Missile, 421
Seal for Re-Usable Envelopes, Envopak, Ltd., 1026
Sealed Vehicles, Potable Water Supply in, General Electric Space Sciences Laboratory, 46
Sealing, Food Packet, Cooling Air for, Kellogg Company, 282
Tape for Threaded Pipe Joints, William Rose, Ltd., 982
Valves for Gas Control, (Patent, 613)
Seals Fluid, British Hydromechanics Research Association, 366
Seating Platform in High Tensile Rubber, Vitafoam, Ltd., 597
Secondary Industries, Australia's, Broken Hill Pty., Ltd., 702
Radar, 1115
Seeing and Driving—Road Surfaces, A. J. Field, (Letter, 758)
Seismic Mountings for Large Machine Tools, J. A. Macinante, 880
Self-Adhesive Packaging Material, Spicers, Ltd., 630
Climbing Lift, Alimak Verken A.B., 682
Emptying Carrier, Beet Harvester, Catchpole Engineering Company, Ltd., 72
Propelled Combine Harvester, International Harvester Company of Great Britain Ltd., 971
Ventilated Axle-Hung Traction, Crompton Parkinson, Ltd., 561
Selling Computers in Europe, Elliott Brothers (London) Ltd., 725
Semi-automatic Universal Gear Shaving Machine, Churchill Gear Machines, Ltd., 54
Semiconductor, Devices, Texas Instruments Ltd., 401
Factory, Southampton, Mullard, Ltd., 756
Rectifier Stacks, (Patent, 127)
Semiconductors, Slow-Down in, 1034
Sensors, Light, Photovoltaic, Texas Instruments, Ltd., 850
Separator, Mineral, Magnetic, Rapid Magnetic Ltd., 364
Series-wound Motors, Circuit Arrangements for, (Patent, 1073)
Service Headquarters at Feltham, Oil, Esso Petroleum Company, Ltd., 205
Training Unit, Mobile, British Motor Corporation, Ltd., 436
Servo, Hydraulic, Air Powered, Clayton Dewandre Company, Ltd., 209
Valve, Electro-Hydraulic, Keelavite Hydraulics, Ltd., 18
Servomechanisms, Principles of, A. Tyers and R. B. Mills, (Review, 1019)
Severn Bridge, (Leading Article, 576, 603)
and Forth Bridges, Asphalt Surfaces for the, 6
River, Water Resources Committee, 725
Sevens, Europe at Sixes and, (Leading Article, 169)
Sewage Plant and Control at Mogden, Recent Developments, 887
Shaft Furnaces, (Patent, 47)
Furnaces, Charging Devices for, (Patent, 333)
Shafts with Hooke's Joints, Rubber Coupling for Propeller, 598
Shanks and, Squares, Interchangeability, D. M. Cowley, 351
Shaping, Hot, of Metals and Metal Alloys, (Patent, 334)
Share Bid from U.S.A., Ford Motor Company, Ltd., 851
Sharp Leading Edge Having 65 Degrees Sweep, Some Measurements in the Vortex Flow Generated by a, N. C. Lambourne and D. W. Bryer, (Report, 806)
"Shay" Geared Steam Locomotive, 1879-1945, R. A. S. Abbott, 1641
Shear Stress in a Box Beam, Distribution of, B. A. Walker, (Letter, 193); W. G. Heath, (Letter, 104)
Shearing Machines, Keeton Sons and Co., Ltd., 639
and Punching Machine, Universal, Valdarno S.A., 993
Sheds, High-Voltage Insulators with Helicoidal, 161
Sheet Metal, Contact Resistance of, Siemens-Schuckerwerke A.G., 952
Sheets, Steel, with All-over Plastics Coating, Dorman Long and Co., Ltd., 984
Shields, Tunnelling, Oil Hydraulic System for, Canada Iron Foundries, Ltd., 750

SHIPS AND SHIPBUILDING

Aluminium Alloy Survey and Patrol Launch, Universal Shipyards, (Solent) Ltd., 41
Ballast Pump, De Laval Ljungstrom Turbine Company, 114
British Shipbuilding Compendium, (Review, 393)
Centenary of the Fairfield Shipbuilding and Engineering Company, Ltd., 846
Direction Finder for Small Craft, Pye, Ltd., 565
Directory of Shipowners, Shipbuilders and Marine Engineers, 1959, (Review, 65)
Engine-Room Explosion in "Capetown Castle", 728
Extraordinary General Meeting, Shipbuilding Research Association, 845
Fire Fighting Tug "Keverne", John J. Thornycroft and Co. Ltd., 41
Fishing Boats of the World, (Review, 393)
High-Speed Coal Shipping, Mitchell Engineering Ltd., 402
Hydrofoil Boat for Stockholm—Mariehamn Service, Cantiere Navale Leopoldo Rodriquez, 993
International Boat Show, Ship and Boat Builders' National Federation, 1059
Large Moulded Resin-Glass Hull, Halmatic Ltd., 363
Last Southampton Paddle Steamer, J. H. Jellett, (Letters, 25, 428); Wm. C. Budd, (Letter, 193)
Launches and Trial Trips, 40, 78, 158, 213, 285, 366, 403, 441, 511, 565, 604, 643, 684. 732, 768, 811, 850, 906, 948, 1026, 1065
Laying of Keel of Italian Liners, Societa per Azioni Ansaldo, 569
Marine Diesel Engine 25,000 b.h.p., A/S Burmeister and Wain, 1032
Merchant Shipbuilding Returns, Lloyd's Register of Shipping, 214
Mersey Passenger Ferry "Woodchurch", Philip and Son, Ltd., 41
New Cunard Liner, (Leading Article, 617)
Oil Tanker Fitted with Stabilisers, Ateliers et Chantiers de France, 902
Tankers, (Patent, 654)
Paddle Steamer Preservation, S. Roberts, (Letter, 503)
Report on Shipbuilding and Marine Engineering Industries, Department of Scientific and Industrial Research, (Leading Article, 1039)
Rotary Vane Steering Gear, Brown Brothers and Co. Ltd., 565
Self-Propelled Pontoon Ferries, Saro (Anglesey) Ltd., 510
Ship-to-Air Missile, "Seacat" Short-Range, 421
Ship Loading Calculator, Sperry Gyroscope Company, Ltd., 114
Statistical Tables, Lloyd's Register of Shipping, 988
Shipbuilding Criticised, Department of Scientific and Industrial Research, (Leading Article, 615)
and Engineering, Wages, 605
Returns, Lloyd's Register of Shipbuilding, 765
Statistics, Shipbuilding Conference, 252, 769
Wages, Shipbuilding Employers' Federation, 949
Ship's Steel, Lloyd's Register of Shipping, 275
Shipyard Crane, Monotower, 100-ton Travelling, Butters Brothers & Co. Ltd., 385
Small Laboratory Ship Testing Plant, T. Constantine, 710
Steam Turbine Installations, Marine Propulsion, (Patent, 521)
Survival at Sea, G. W. R. Nicholl, (Review, 428)
Tanker Cleaning Berth at Birkenhead, Mersey Tanker Services, Ltd., 901

NAMED VESSELS

"Canberra", S.S., Turbo-Electric Propulsion of, A.E.I. Heavy Plant Division, 831
"Caesarea", S.S., New Vessel for Channel Islands Services, G. W. Tripp, 975
"Dreadnought", H.M.S., (Leading Article, 655), 680, 730
"Egnatia", Passenger and Car Ferry, Societe des Chantiers Reunis Loire-Normandie, 610
"Enterprise", U.S.S., (Leading Article, 379); Launch of, Newport News Shipbuilding and Dry Dock Company, 1120
"Freshwater", Paddle Steamer, G. W. Tripp, (Letter, 104)
"Gatcombe", M.V., Tug/Tender for Southampton, G. W. Tripp, 243
"J. Paul Getty" Oil Tanker, 902
"Ghurka", H.M.S., Launch of, John I. Thornycroft and Co., 208
"Landward", High-Speed Launch, Philip and Son, Ltd., 41
"Llanwern", Diesel-Electric Tug, P. K. Harris and Sons Ltd., 103
"Leonardo Da Vinci", Liner, Societa Azioni Ansaldo, 329
"Meeching", M.V., Tug for Newhaven, G. W. Tripp, 275
"Northern Star", Launch of, 723
"Oriana", P. & O.-Orient Liner, 920, 962, 1003
"Ramses", Suction, Dredger, 372
"Rembrandt", G.T.V., Cargo Ship, Smith's Dock Company, 199
"Serenia", S.S., Launch of, Vickers-Armstrong (Shipbuilders) Ltd., 684
"Windsor Castle", R.M.S., Union Castle Mail Steamship Company Limited, 354
"Woodchurch", Mersey Passenger Ferry, Philips and Son, Ltd., 41

NAVAL MATTERS

Classification of Warships, (Leading Article, 131)
Flight Deck Communications System, The Plessey Company Ltd., 473
Holy Loch Base, (Leading Article, 784)
Jane's Fighting Ships 1960-61, (Review, 1109)

Shock, Hydro-Pneumatic, (Patent, 222)
Shopmen's Pay Claim, Railway, 644
Shovel and Excavator Hydraulic, Whitlock Bros., Ltd., 508
Tractor, Four-Wheel Drive, Allis-Chalmers, Great Britain Ltd., 798
Shower Handpiece, Safety, Siemens-Electrogeräte A.G., 517
Shredder, Lundell (Great Britain) Ltd., 73
Shunter, Industrial, Diesel-Hydraulic, Ruston and Hornsby, Ltd., 211
Shuttle, Car and Ingot Buggy Scheme, R. B. Larkinson, 231
Sideband Transmission, Independent, Redifon, Ltd., 110
Sidewall Inflation, Goodyear Tyre and Rubber Co., 424
Siding Allocation by Programme, London Transport, District Line, 727
Signal, Railway, Electronic Interlocking, Mullard Equipment, Ltd., 1022
Signalling Equipment, Cab and Train Speed Control, (Patent, 450)
Signals, Traffic, and Roundabouts, Institution of Civil Engineers, Traffic Engineering Study Group, 930; D. F. C. Vosper, (Letter, 1052)
Training for Civil Aviation, Civil Aviation Signals Training Establishment, 36
Signs, Small Plant for the Rapid Manufacture of Permanent Day-and-Night, 836
Silica Gel for Use as Desiccant for Packages: Activated Alumina for Use as Desiccant for Packages, (B.S.I., 88)
Silicon Cells and Solar Energy, C. A. Escoffery and Werner Luft, 316
and Germanium Power Rectifiers, J. C. Read, 533; D. R. Coleman, (Letter, 838); D. B. Corbyn, (Letter, 669)
Rectifier for Aluminium Smelting, 6000kW, Westinghouse Electric Corporation, and Aluminium Company of America, 571
Rectifiers, Westinghouse Brake and Signal Company, Ltd., 561
Rectifiers in Main Line Service, French National Railways, 292
Rectifiers in Motor Coach, Notchless Control and, English Electric Company, Ltd., 601
Simulator, Universal Automobile, General Precision Systems, Ltd., 35
Single-Phase Motors, (Patent, 333)
-Sideband Radio, Transistorised, Redifon Ltd., 905
-Spindle Chucking Machine, The National Acme Company, 855
-Spindle Honing Machine, Barnes Drill Company, 914
Sinter Plant, Workington, Workington Iron and Steelworks, 1020
Sintering Machine, Iron Ore, 162
Sites, Proposed, for South Coast Nuclear Power Stations, 1059
Six-Cylinder 2.3 Litre Borgward with Bosch Air Suspension, 673
-Speed Gearbox in Overdrive Form, David Brown Industries, Ltd., 597
-Wheeler, Dodge, 527
Sixes and Sevens, Europe at, (Leading Article, 169
Sizewell Nuclear Power Station, English Electric, Babcock and Wilcox, Taylor Woodrow Atomic Power Group, 936
Skid-Resistance Tester, Instructions for Using the Portable, (Report, 70)
Skinning Metropolitan Buildings, 1860, 865
Slender Webs, Tests on Girders with, 6
Sliding Contact Device, (Patent, 261)
Slip Clutch, Overload, (Patent, 821)
Slipring-Free Torgue Gauge, ASEA, 993
Slot Broaching, Machine, Large Turbine Disc, J. L. Jameson, Ltd., 494
Slough Occupational Hygiene Service, Slough Industrial Health Service, 473
Slow Shifting under Stick-Slip Conditions, Sensitivity of, B. R. Singh, 187
Small Craft, Direction Finder for, Pye, Ltd., 565
Portable Water Purifier, Permutit Company Ltd., 210
Smelting, Aluminium, 6000kW Silicon Rectifier for, Westinghouse Electric Corporation and Aluminium Company of America, 571
Low-Load Blast-Furnace for Iron, (Patent, 1073)
Smoke Control, Progress of, (Leading Article, 300)
Social Responsibility, Industry and, 812
Soil-Vehicle Systems, Turin Polytechnic, 427
Solar Energy, Silicon Cells and, C. A. Escoffery and Werner Luft, 316
Solid State Physics Division, Harwell, Atomic Energy Research Establishment, 562
Something New, 1860, 489
Sound Insulation and Noise Reduction, (B.S.I., 1050)
South Africa, Electric Locomotives for, Associated Electrical Industries Limited, Traction Division, 358
African Mechanical Engineering Research, Progress in, Mechanical Engineering Research Unit, 1029
African Research into Harbours and Coastlines, 254
Coast Nuclear Power Stations, Proposed Sites for, 1059
Kensington Museum, 1860, 453
Southampton Paddle Steamer, Last, Wm. C. Budd, (Letter, 193); J. H. Jellett, (Letters, 25, 1428)
Tug/Tender for, M.V. "Gatcombe", G. W. Tripp, 243
Space, Another First in, for Russia, (Leading Article, 335)
Electric Power Units, Nuclear, Reactor, 384
European Research in, 1033
Flight and Rockets up to 1960, John E. Allen, 92, 132
Probes, 382
Research, Grants for, Department of Scientific and Industrial Research, 279
Research, Radio Convention on, British Institution of Radio Engineers, 400
Technology Symposium, 1028
Vehicles, National Aeronautics Space Administration, 382
Spacecraft Materials, Surface Effects on, First Symposium, Francis J. Clauss, (Review, 547)
Spark Ignition Torch, Calor Gas (Distributing) Company, Ltd., 726
Special Purpose Drilling Set-Ups, R. S. Brookman, Ltd., 13
Specialisation, John Marsh, 566
Spectrograph for the Determination of up to 24 Elements, Automatic X-Ray, C. H. F. Muller, G.m.b.H., 772
Spectrometer, Automatic X-Ray, Hilger and Watts, Ltd., 948
Mass, Atlas-Werke, A.G., 771
Speech Transmission by Modulated Light Beam, General Electric Company, Ltd., 210
Speed Control, Train and Cab Signalling Equipment, (Patent, 450)
Controller, Improved Motor, Servomex Controls Ltd., 283
Reduction Unit, Constant Torque, Variable, Fairbairn, Lawson, Combe, Barbour, Ltd., 112
Spinning and Flow-Forming Lathe, Automatic, Leifeld and Co., 609
Spot Welder, Electro Mechan-Heat, Ltd., 603
Welding Gun, Portable Welders, Ltd., 811
Welding from One Side of Work, Torch for, British Oxygen Company, Ltd., 721
Welding Machines, Small, Electro Mechan-Heat Ltd., 248
Spring Clutch, Diaphragm, Laycock Engineering, Ltd., 598
and Pneumatic Suspensions for Railway Vehicles, (Patent, 1073)
Square, Adjustable, Moore and Wright (Sheffield), Ltd., 810
Squares, Interchangeability of Shanks and, D. M. Cowley, 351
Stabilisers, Oil Tanker Fitted with, Ateliers et Chantiers de France, 902
Stack, Carbon, for Vehicle Control, T. H. Lewis, Ltd., 643
Stadium Grandstand, Aluminium Roof for, 254
Stafford By-Pass, John Laing and Son Ltd., 36
Staging, Mobile, Bristol Aircraft Ltd., 284
Stahl, Fliesspressen von, Heinz D. Feldmann, (Review, 839)
Stainless Steels, Martensitic, (Patent, 48)
Stalingrad-Donbass, 800kV D.C. Transmission System, E. S. Groiss, A. V. Posse and V. E. Touretski, 66
Stamford By-Pass, 767
Standard Associates, British Standards Institution, 320
Indexing Fixture, Delapena and Son, Ltd., 59
Signal Generator, Marconi Instrument, Ltd., 156
"Vanguard", with a Six-Cylinder Engine, 672
Standardised Bridge Beams in Prestressed Concrete, Cement and Concrete Association Prestressed Concrete Development Group, 507
Standards, British, Structural Steelwork and, W. A. Tuplin, (Letter, 104); W. A. Tuplin and A. N. Procter, (Letter, 240); G. Weston, (Letter, 193)
Starter Motor, Geared, Siba Electric, Ltd., 844
State of the Thames, 1860, 51
Static, Temperature in Supersaturated Expanding Steam, an Indirect Method of Measuring, Denis J. Ryley, 343
Statically-Inderminate Frames, Contributions of Navier and Clebsch to the Theory of, T. M. Charlton, 712
Statics and the Engineer, Sir Alfred Pugsley, 424
Station, Harlow Town, British Railways, 155
Stationery Factory at Sawston, Spicers, Ltd., 1059
Statistical Inference and Probability for Engineers, C. Derman and M. Klein, (Review, 65)
Tables, Ship, Lloyd's Register of Shipping, 988
Statistics, Agricultural, Computer for, Department of Agriculture and Fisheries, 730
Basic Road, British Road Federation, Ltd., 530
Engineering, Board of Trade, 769
Steam, an Indirect Method of Measuring Static Temperature in Supersaturated Expanding, Denis J. Ryley, 343
Locomotive, British, Since 1900, A. E. Durrant, (Letters, 800, 974); W. A. Tuplin, 395
Roller, Old, Preserved, 841
Turbine Runaways, J. Hattingh, (Letter, 240)
Steel Chimneys, Superwelds (Lewisham) Ltd., 322
Columns for Street Lighting, (B.S.I., 1050)
Dangerous Brittleness in, (Leading Article, 1000)
De-Nationalisation of, Iron and Steel Holding and Realisation Agency, 1066
at Elevated Temperatures, Procedures for Obtaining Properties of, (B.S.I., 298)
Industry, Automation in the, British Iron and Steel Research Association, (Leading Article, 696)
Industry Expenditure, British Iron and Steel Federation, 324
Oxidation by Carbon Dioxide, Society of Chemical Industry, Corrosion Group, 27
Sheets with All-Over Plastics Coating, Dorman Long and Co., Ltd., 984
Steelmaking, Thermochemistry for, John F. Elliott and Molly Gleiser, (Review, 631)
Steels, Martensitic Stainless, (Patent, 48)
Steelwork, Structural, G. Weston, (Letter, 25)
Structural, and British Standards, W. A. Tuplin and A. N. Procter, (Letter, 240); G. Weston, (Letter, 193)
Structural, Metal-Sprayed, British Iron and Steel Research Association, 110
Structural, Rules and Regulations for, A. N. Procter, (Letter, 64)
Steelyards, (Patent, 997)
Steering Gear, Rotary Vane, Brown and Co. Ltd., 565
Sterling Area Exports, 851
Stick-Slip Conditions, Sensitivity of Slow Shifting under, B. R. Singh, 187
Stiffness of a Crane Jib, J. F. Eden and R. H. Wood, 181; M. J. Gercke, (Letter, 1108)
Stockholm-Mariehamn Service, Hydrofoil Boat for, Cantiere Navale Leopoldo Rodriquez, 993
Stockpiling, Conveyor, Mobile, Screening and, Michael and Partners Ltd., 400
Stone, Jet Flame Drilling and Working of, Union Carbide Europa, S.A., 162
Stop Valves, Balanced, British Ermeto Corporation, Ltd., 22
Storage Heaters, Thermostatic Control of Electric, (Patent, 297)

Straightening Machine for Shafts, Two-Roll, Th. Kieserling and Albrecht, 609
Street Lighting, Steel Columns for, (B.S.I., 1050)
Stress Analysis Committee, Joint British Committee for Stress Analysis, 364
in a Box Beam, Distribution of Shear, B. A. Walker, (Letter, 193)
Relieving Large Welded Bridge Girders, Fairfield Shipbuilding and Engineering Company, Ltd., 201
Strike, the General Electric, 953
Tally Clerks', Minister of Labour, 949
Strip Material, Coils of, Equipment for the Manipulation, De-Coiling, Fattening, Feeding, Cutting and Stacking of, Humphris and Sons, Ltd., 11
Mill, Aluminium, Expansion of Rogerstone, Alcan Industries, Ltd., 635, 1064
Oiling Device, Clark's Press Equipment, Ltd., 1064
and Wire Forming Machines, Automatic, Heenan and Froude, Ltd., 13
Structural and Bridge Engineering, Sixth International Congress on, 36
Damping, the Effect of, on Binary Flutter, E. G. Broadbent and Margaret Williams, (Report, 1058)
Design, Advanced, Cyril S. Benson, (Review, 25)
Elements, Sponsored Fire Resistance Tests on, (Report, 928)
Engineering Advances, International Association for Bridge and Structural Engineering, 4
Joints, Internal Damping Due to, and Techniques for General Damping Measurement, D. J. Mead, (Report, 8)
Steelwork, G. Weston, (Letter, 25)
Steelwork and British Standards, W. A. Tuplin and A. N. Procter, (Letter, 240); G. Weston, (Letter, 193)
Steelwork, Metal-Sprayed, British Iron and Steel Research Association, 110
Steelwork, Rules and Regulations for, A. N. Procter, (Letter, 64)
Students, Overseas in Britain, London Conference on Overseas Students, 680
for Technical Experience, Exchange of, International Association for the Exchange of Students for Technical Experience, 769
Studies, Advanced Business, 812
Study and Use of Metals, Institution of Metallurgists, 757
Submarine, Cable Direct to Sweden, 684
Nuclear-Powered, "Dreadnought", 730
Submerged Tunnel Units, Laying, (Patent, 486)
Suburban Electrification, Multiple-Unit Trains for, British Railways, Eastern Region, 667
Railway Electrification, Glasgow, 763
Succession, Geological, Occurrence of Sulphates in, E. M. Hughes, 660
Suction-Dredger "Ramses", 372
Sugar Beet, Model of Raking Machine for Discharging 120 Tons per Hour, Skoda Works, 689
Sulphates in the Geological Succession, Occurrence in, E. M. Hughes, 660
Summer School in Electrical Engineering, Associated Electrical Industries, Ltd., 153
School on Industrial Archaeology, Anglo-American, University of Manchester Extra-Mural (Extension) Department, 941
Superconductive Switching Device, (Patent, 1037)
Superconductivity and Radio Research, General Electric Co. Ltd., 996
Supercritical Generating Units for Drakelow-C Power Station, Central Electricity Generating Board, 313
Supergrid, 400kV, Central Electricity Generating Board, 1023
Supersaturated Expanding Steam, an Indirect Method of Measuring Static Temperature in, Denis J. Ryley, 343
Supersonic Transport Aircraft, Royal Aeronautical Society, 1006
Supersonics and B.O.A.C., British Overseas Airways Corporation, (Leading Article, 263)
Supervision Relays, Trip Circuit, English Electric Company, Ltd., 63
Supply for Norwegian Telecommunication Services, "No-Break", 475
Point Earth Proving, Nalder Brothers and Thompson, Ltd., 625
and Research, Electricity, (Leading Article, 523)
Systems, Large Electricity, International Conference on Large Electric Systems, (C.I.G.R.E.), 7, 52
Supports Wood Laminate in a V.L.F. Radio Transmitter, Permali, Ltd., 681
Surface Effects on Spacecraft Materials, First Symposium, Francis J. Clauss, (Review, 547)
Finish Measurement, Payne Products International, Ltd., 941
Grinder, High Production, Thompson Grinder Co., 777
Grinder, Rotary Table, Selson Machine Tool Company, Ltd., 14
Shallowly Pitted, Hydrodynamic Drag of a, J. R. D. Francis, 532
Treatment for Aluminium, Durham Raw Materials, Ltd., 565
Surfaces, Road, Seeing and Driving, J. M. Waldram, 594, 632
Survey, Origin and Destination, Value for London, (Leading Article, 51)
and Patrol Launch, Aluminium Alloy, Universal Shipyards (Solent) Ltd., 41
Traffic, for Dartford-Purfleet Tunnel, Traffic Engineering Study Group, 849
Surveyor, County, on Roads, (Leading Article, 697)
Surveys, Air, in the Indus Catchment, Hunting Surveys, Ltd., 508
Survival at Sea, G. W. R. Nicholl, (Review, 428)
Suspension, Air, Bosch on, Six-Cylinder 2.3 Litre Borgward, 673
Alignment Calibration, Optical, V. L. Churchill, 600
Bridge, Tamar, Building the Towers of the, 242
Toggle Link Rubber, Metalastik, Ltd., 597
of Wind Tunnel Models, Magnetic, Office National d'Etudes et de Recherches Aeronautiques, 607
Suspensions for Railway Vehicle, Pneumatic and Spring, (Patent, 1073)
Svenska Interplanetariska Sallskapet, Eleventh International Astronautical Congress, 382
Swing Gap Bed Lathe, 36in, Crawthorne Engineering Company, Ltd., 58
Switchboard for Feeder Stations, Oil-Insulated 25kV, Switchgear and Cowans, Ltd., 624
Switches, Air-Break, and Fuses, Heavy-Duty Composite Units, 109
Automatic Testing Jig for Domestic, The General Electric Company Limited, 471
Fluid Blast Electric, (Patent, 47)
Limit, (Patent, 781)
Switch-Fuse Units, Extended Range of High-Voltage, Line Equipment, Ltd., 112
Switchgear, Industrial, Midland Electric Manufacturing Co. Ltd., 440
Switching Circuits, Magnetic, (Patent, 298)
Device, Superconductive, (Patent, 1037)
Devices Discharge, for Radar Equipment, (Patent, 262)
Station, "Packaged" Weatherproof, English Electric Company, Ltd., 904
Symington's Grave in Aldgate, 110
Symposium on Communications Satellites, British Interplanetary Society, 1067
on the Determination of Gases in Metals, 237
on Experience of Large Scale Industrial Vacuum Plant, Institution of Mechanical Engineers, 906
on Pressure Vessel Research Towards Better Design, British Welding Research Association, 1061
on the Protection of Gas Plant, Institution of Gas Engineers, 364
Space Technology, 1028
Synchronous Electric Motors, (Patent, 861)
Machines, Salient-Pole Digital Computer Applied to the Design of, G. K. Ridley, 705
Synchrotron, Alternating Gradient, at Brookhaven National Laboratory, 446, 481
Synthetic Rubber Developments, International Synthetic Rubber Company Ltd., 438

T

Tally Clerks' Strike, Minister of Labour, 949
Tamar Suspension Bridge, Building the Towers of the, 242
Tandem Master Cylinder, Girling, 808
Tancarville Bridge, 5
Tandem-Winged Aircraft, (Patent, 450)
Tank, Kurt, Design for Flight, Heinz Conradid, (Review, 65)
Tanker, Articulated, Yorkshire Engineering and Welding Company (Bradford), Ltd., 528
Cleaning Berth at Birkenhead, Mersey Tanker Services, Ltd., 901
Oil, Fitted with Stabilisers, Ateliers et Chantiers de France, 902
Tankers, Oil, (Patent, 654)
Tannery Effluent Purification, Atlas Copco Greece, 444
Tap-changer Assembly for Undercar Mounting, Twin-Camshaft, The General Electric Company, Ltd., 590
Locomotive, 591
Tape Cable, Technograph Electronic Products, Ltd., 762
Control, Contouring Machine with, Ex-Cell-O-Corporation, 912
Control, System of Numerical, "Probomat", Warner and Swasey Company, 819
Controlled Cam Milling Machine, Brown and Sharpe Manufacturing Company, 913
Controlled Drilling Machine, Automatic, Catmur Machine Tool Corporation, Ltd., 58
Controlled Production Milling Machine, Kearney and Trecker Corporation, 912
Reader, Punched Paper, English Electric Company, Ltd., 1115
Sealing, for Threaded Pipe Joints, William Rose, Ltd., 982
Transport Mechanism, Redifon, Ltd., 728
Tapping and Drilling Machine, with Automatic Indexing Table, James Archdale and Co. Ltd., 249
and Drilling Machine Radial, A. Kitchen-D. Walker, Ltd., 942
Target Drone, CT-41, Nord, Sir W. G. Armstrong Whitworth Ltd., 421
Systems, Towed, Del Mar Engineering Laboratories, 903
Tariff, Electricity Bulk Supply, Central Electricity Generating Board, 1114
Technical Digests, European, European Productivity Agency, 362
Experience, Exchange of Students for, International Association for the Exchange of Students for Technical Experience, 769

TELECOMMUNICATIONS

U.R.S.I. Meeting in London, International Scientific Radio Union, (U.R.S.I.), 438
Adcock Direction Finder, (Patent, 128)
Anti-Collision Radio Equipment for Aircraft, (Patent, 449)
Apparatus for Measuring the Tension in Cables, (Patent, 88)
Automatic Telex Exchange, 1023
Caribbean Aeronautical Communications, 75
Co-Axial Plug, (Patent, 917)
Commonwealth Telecommunications Report, Commonwealth Telecommunications Board, 845
Communications, V.H.F., Navigation and Approach Facilities, Elliott Brothers (London) Ltd., 455
Construction of 210ft Radio Telescope for Australian C.S.I.R.O., 289
Crash Position Indicator, (Patent, 861)
Direct Submarine Cable to Sweden, 684
Direction Finder for Small Craft, Pye, Ltd., 565
Discharge Switching Devices for Radar Equipment, (Patent, 262)
Electrical Connecting Arrangements, (Patent, 1037)
Electromagnetic Waveguide Devices, (Patent, 128)
Electron Beam Parametric Amplifier Tube Unit, Marconi, 456
Electronic Telephone Central Office, Bell Telephone Laboratories, 1071
Experimental Electronic Telephone Exchange System, Highgate Wood, 938
First Broadband Microwave Link in New Zealand, Standard Telephones and Cables, Ltd., 983
Flight Deck Communications System, The Plessey Company Ltd., 473
Frame Grid Valve Manufacture, Mullard, Ltd., 638
Gallium Arsenide Diodes, Bell Telephone Laboratories, 412
High-Power C.W. Klystron, English Electric Valve Company, Ltd., 1061
Hobbies Exhibition, Radio, Radio Society of Great Britain, 441
Improved Marine Radar Series, Decca Radar, Ltd., 802
Independent Sideband Transmission, Redifon Ltd., 110
Inductance Coil, (Patent, 414)
Industrial Telemetry, J. E. Dick, 748
Introduction to Laplace Transforms for Radio and Electronic Engineers, W. D. Day, (Review, 839)
Local Broadcasting and Radio Links, Pye Ltd., 362
Low-Distortion Transistor Oscillator, Solartron Laboratory Instruments, Ltd., 939
Low-Power Television Station at Hastings, 1107
Mechanised Assembly of Television Receivers, General Electric Company, Ltd., 203
Telephone Accounting, International Computers and Tabulators, Ltd., 110
Microwave Components, Aveley Electric, Ltd., 1060
Frequency Checking Equipment, Standard Telephones and Cables, Ltd., 1114
Measurement Techniques, Institution of Electrical Engineers, Electronics and Communications Section, 1024
Mobile Radio Committee Report, 681
Motor-Cycle Police Radio, General Electric Company, Ltd., 212
Multi-Cavity Magnetrons, (Patent, 741)
"No-Break" Supply for Norwegian Telecommunication Services, 475
Optical Maser Used in Communication Experiments, Bell Telephone Laboratories, 1035
Party-Lines in Automatic Telephone Systems, (Patent, 87)
Piezo-Electric Crystal Units, (Patent, 693)
Plan for Local Broadcasting, Pye, Ltd., (Leading Article, 695)
Poldhu Radio Site for National Trust, 110
Post Office Research at Dollis Hill, 592
Office Telecommunications Services, 902
Prototype Television Camera, British Broadcasting Corporation, 438
Pulse Code Modulation, Institution of Electrical Engineers, 796
Code Modulation Telephony, Standard Telecommunication Laboratories, Ltd., 1115
Radar Navigational Aids, Murphy Radio, Ltd., 511
Radio Convention on Space Research, British Institution of Radio Engineers, 400
Research Report, Radio Research Board, 562
Show, 1960, 362
Resistor Compositions, Du Pont de Nemours International, S.A., 1059
Rotary Position Selector Unit, Plessey Company Limited, 363
Satellite System for World-Wide Communications, Bell Systeni, 518
Secondary Radar, 1115
Self-Supporting Plastic Cylinder for Television Aerial, Siemens and Halske Aktiengesellschaft, 952
Semiconductor Devices, Texas Instruments Ltd., 401
Factory, Southampton, Mullard, 756
Rectifier Stacks, (Patent, 127)
Signals Training for Civil Aviation, Civil Aviation Signals Training Establishment, 36
via "Echo" Satellite, 437
Single and Double Pulse Generator, Solartron Laboratory Instruments, Ltd., 1065
"Sixty" Series of V.H.F. Communication and Navigational Aid Equipment, Marconi's Wireless Telegraph Company Ltd., 455
Slow-Down in Semiconductors, 1034
Some technical Aspects of Satellite Communication, "Echo", 469
Speech Transmission by Modulated Light Beam, General Electric Company, 210
Superconductivity and Radio Research, General Electric Co. Ltd., 996
Symposium on Communications Satellites, British Interplanetary Society, 1067
Telegraphs in Victorian London, John Durham, (Review, 428)
Telephone Development Proposal, Post Office Engineering Union, 685
Developments in Scotland and Midlands, A.E.I. Telecommunications Division, 39
Television Studio, World's Largest, 43
Transmitters for Canada, Marconi's Wireless Telegraph Company, Ltd., 902
Test Waveform Generator, Feedback Ltd., 321
Transatlantic Cable Between the United Kingdom and the U.S.A., 281
Transducer, (Patent, 693)
Transistorised Single-Sideband Radio, Redifon Ltd., 905
Transponder Test Equipment, Marconi Instruments, Ltd., 564
Tunnel Diodes in Production, Texas Instruments, Ltd., 903
Underwater Television Camera, Marconi's Wireless Telegraph Company, Ltd., 1024
Valve Tester, Taylor Electrical Instruments, Ltd., 564
Vidicon Tubes, E.M.I. Electronics, Ltd., 1060
Wideband Amplifier for Marine Transmitters, 37
Wood Laminate Supports in a V.L.F. Radio Transmitter, Permali, Ltd., 681
Telemetry, Industrial, J. E. Dick, 748
Telephone Accounting, Mechanised, International Computers and Tabulators, Ltd., 110
Central Office, Electronic, Bell Telephone Laboratories, 1071
Development Proposal, Post Office Engineering Union, 685
Developments in Scotland and Midlands, A.E.I. Telecommunications Division, 39
Exchange System, Experimental Electronic, Highgate Wood, 938
Systems, Automatic, Party-Lines in, (Patent, 87)
Telephony, Pulse Code Modulation, Standard Telecommunication Laboratories, Ltd., 1115
Telescope, Radio, 210ft, Construction for Australian C.S.I.R.O., 289
Telescopic Friction Prop Wedge Release Mechanism, National Coal Board Central Engineering Establishment, 113
Television Aerial, Self-Supporting Plastic Cylinder for, Siemens und Halske Aktiengesellschaft, 952
Camera, Prototype, British Broadcasting Corporation, 438
Camera, Underwater, Marconi's Wireless Telegraph Company, Ltd., 1024
Receivers, Mechanised Assembly of, General Electric Company, Ltd., 203
Station at Hastings, Low-Power, 1107
Transmitters for Canada, Marconi's Wireless Telegraph Company, Ltd., 902
Telex Exchange, Automatic, 1023
Temperature Controlled Water Circulator, Churchill Instrument Company, Ltd., 732
Measurements in a Doxford Cylinder Liner, B. W. Millington, 871
in Supersaturated Expanding Steam, an Indirect Method of Measuring Static, Denis J. Ryley, 343
Tension in Cables, Apparatus for Measuring, the, (Patent, 88)
Tercentenary Address, The Royal Society, Sir Cyril Hinshelwood, 140
Exhibition, The Royal Society, 208
"Terramatic" Transmission, J. I. Case Company, Ltd., 837
Test Methods for Bitumen, (B.S.I., 48)
Tester, Brake, Weaver Manufacturing and Engineering Company, Ltd., 599
Testing in Electrical Engineering, November, 1961, Conference on Non-Destructive, Institution of Electrical Engineers, Measurement and Control Section, 198
Fatigue, Programmed, Problems Involved in the Development of, T. R. G. Williams and D. H. Hughes, 703
Heavily Loaded Plain Bearings, O. Holfelder, 504
Jig for Domestic Switches, Automatic, The General Electric Company Ltd., 471
Lubricants Under Gamma Irradiation, Rig for, Mobile Oil Company, Ltd., 639
Mineral Aggregates, Methods of,—B.S.S. 812—Road Accidents, H. N. Jenner, (Letter, 800)
Motor Vehicle, 207
Plant, Ship, Small Laboratory, T. Constantine, 710
Rocket Engine, Spadeadam Rocket Establishment, 431
Transformer Design and, English Electric Company, Ltd., 664
Tests on Eccentrically Loaded Riveted Joints, A. J. Francis and G. L. Belcher, 177
Thames to Lee Valley Water Tunnel, Metropolitan Water Board, 578
"Trader", Garner Motors, Ltd., 596
Theory of Statically Indeterminate Frames, Clebsch and Navier, Contributions to, T. M. Charlton, 712
Thermal Cycling Rigs for Nuclear Reactor Fuel Elements, J. R. Linge, 1093
Relays, Coventry Controls, Ltd., 634
Thermionic Generation, Westinghouse Electric Corporation, 86
Thermochemistry for Steelmaking, John F. Elliott and Molly Gleiser, (Review, 631)
Thermoelectric Cooling Unit, Salford Electric Instruments, Ltd., 809
Devices, Some Notes on the Possible Application to the Generation of Electric Power, (Report, 759)
Generation, Westinghouse Electric Corporation, 85
Thermometer Type Voltage Indicator Tube, (Patent, 127)
Thermostatic Control of Electric Storage Heaters, (Patent, 297)
Thermostatically Controlled Coupling, Smith's Motor Accessories, Ltd., 599

Thousands of Millions to be Saved, Railway Conversion League, (Leading Article, 744); I. G. Moore, (Letter, 800); Roy G. De Bray, (Letter, 838); T. I. Lloyd, (Letters, 890, 974); I. G. Moore and A. I. Watkinson, (Letter, 934); M. J. Douglass, (Letter, 1018); W. D. Mitchell, (Letter, 1052)
Thread Rolling Machine, Selson Machine Tool Company, Ltd., 14
Threaded Pipe Joints, Sealing Tape for, William Rose, Ltd., 982
Threading Attachment, Saunderson and Costin, Ltd., 62
Machines, Landis Machine-Maiden, Ltd., 59
Three-Dimensional Automatic Diesinking Machine, George H. Alexander Machinery, Ltd., 15
-Speed "Hydramatic" Gearbox, 673
-Station Crankshaft Transfer Line, Norton Company, 857
Throttle and Cut-Off Governing of Petrol Engines, Investigation of, Mahmoud Hassaan Saadawi, 1083
Thruster Rig for Rock Drills, Portable, Holman Brothers (Proprietary), Ltd., 38
Tidal Power Project, the Rance, J. H. M. Sykes, 689
Tilbury, Second Power Station at, 808
Timer, Batching, 811
Tin and its Alloys, E. S. Hedges, (Review, 142)
Tipping and Elevating Equipment, Conveyancer Fork Trucks, Ltd., 37
Trailer, Frameless, Anthony Company, 808
Tippler, Pallet, Massey-Ferguson, Ltd., 71
Tips, Industrial and Water Pollution, 502
Toggle Link Rubber Suspension, Metalastik, Ltd., 597
Tool Holders and Chucks, (Patent, 1121)
Making, Training for, 807
Toolroom Lathe, Woodhouse and Mitchell, Ltd., 62
Torch for Spot-Welding from One Side of Work, British Oxygen Company, Ltd., 721
Torque Controlled Impact Wrench, Consolidated Pneumatic Tool Company Ltd., 460
Gauge, Slipring-Free, ASEA, 993
Indicator, Mechanical, Sir George Godfrey and Partners (Industrial), Ltd., 1024
Transmitting Couplings, Articulated, (Patent, 957)
Torsion Devices: A Survey of Instrument Parts, P. J. Geary, (Review, 143)
Towed Target Systems, Del Mar Engineering Laboratories, 903
Tower Cranes, Mobile for Two- and Three-Storey Building, (Report, 759)
Mobile Mine, E. Taylor and Sons (Manchester) Ltd., 403
Towers, of the Tamar Suspension Bridge, Building the, 242
Track-Circuits, Railway, (Patent, 1073)
Traction Equipments, Alternating Current Electric, (Patent, 261)
Self-Ventilated Axle-Hung, Crompton Parkinson, Ltd., 561
Tractor, Nuffield Organisation, 73
-Driven Irrigation Pump, Arthur Lyon and Co. (Engineers), Ltd., 972
Engine Exhaust Brake, David Brown Tractors, Ltd., 973
Fordson "Dexta", 929
Fordson "Super Major", 930
Four-Wheeled General-Purpose Agricultural, Allis-Chalmers, Great Britain, Ltd., 930
Hitch, Massey-Ferguson, Ltd., 474
Mk. II, Massey-Ferguson, Ltd., 971
Rear Axle Housing, Transfer Machining of, Cross Company, 165
Shovel, Four-Wheel Drive, Allis-Chalmers, Great Britain, Ltd., 798
Trade by Air, 907
Overseas, Board of Trade, 252, 404, 605, 733, 949
Traffic Bearing Structures—Pavings, (B.S.I., 48)
of London, The, 1860, 224
Roads and Their, Ernest Davies, (Review, 352)
Sampling of, F. Garwood, 680
Signals and Roundabouts, Institution of Civil Engineers, Traffic Engineering Study Group, 930; D. F. C. Vosper, (Letter, 1052)
Survey for Dartford-Purfleet Tunnel, Traffic Engineering Study Group, 849
Trailer, Cranes (Dereham) Ltd., 528
Brake, Self-Acting, B. and B. Trailers, Ltd., 1025
Tipping, Frameless, Anthony Company, 808
Winch, Rover, C. M. Hesford and Co., Ltd., 972
Train Speed Control and Cab Signalling Equipment, (Patent, 450)
Training Centre, Agricultural, Agricultural Engineers Association, 566
for Engineers, Practical, Institution of Mechanical Engineers, (Leading Article, 524); E. G. Bayley, (Letter, 758); R. Dobson, (Letter, 714)
of Home Graduates, (Leading Article, 784)
and Recruitment, Federation of British Industries, 367
for Tool Making, 807
Trains for Suburban Electrification, Multiple-Unit, British Railways, Eastern Region, 667
Tranmere, Oil Terminal at, Shell Refining Company, Ltd., Mersey Docks and Harbour Board, 69, 160
Transatlantic Cable Between the United Kingdom and the U.S.A., 281
Airships, 1860, 337
Transducer, (Patent, 693)
Transfer Installation of Four Honing Machines, Automatic, Micromatic Hone Corporation, 911
Line, Crankshaft, Three-Station, Norton Company, 857
Machine for Motor Car Wheel Hubs, 1036
Machines for High-Precision Finishing Operations, Cross Company, 219
Machining of Tractor Rear Axle Housing, Cross Company, 165
Press of 160 Tons Capacity, Pearson Panke, Ltd., 16
Press, 3000-Tonne, 8-Station, Eumuco Aktiengesellschaft für Maschinenbau, 568
Transformer Core Plates, Automatic Cutting of, Ferranti, Ltd., 966
Design and Testing, English Electric Company, Limited, 664
High-Voltage, 375/MVA, ASEA, 217
Motor Coach Rectifier, Brush Electrical Engineering Company, Ltd.
Undercar, Main, Associated Electrical Industries, Ltd., 591
Transformers, (Patent, 449)
Rectifier, for Cross-Channel D.C. Power Link, Fuller Electric, Ltd., 682
in Variable Voltage, Improvements in, (Patent, 168)
Transforms, Laplace, for Radio and Electronic Engineers, Introduction to, W. D. Day, (Review, 839)
Transistor Oscillator, Low-Distortion, Solartron Laboratory Instruments, Ltd., 939
Transistorised Controller with Proportional and Integral Action, A.E.G. Allgemeine Elektricitäts-Gessellschaft, 773
Single-Sideband Radio, Redifon Ltd., 905
Translation of Languages, Machine, and Applied Language Analysis, International Conference on, (1116)
Transmission, Flexible, (Patent, 613)
Hydrostatic, Acting as a Clutch Tolerating Indefinite Slip, A. B. Asbrink and Co., 599
Lines, Fault Locator for, Ferranti, Ltd., 761
System, 800kV D.C., Stalingrad-Donbass, E. S. Groiss, A. V. Posse and V. E. Touretski, 66
"Terramatic", J. I. Case Company, Ltd., 837
Transmitter V.L.F. Radio, Wood Laminate Supports in a, Permali, Ltd., 681
Transmitters, Marine Wideband Amplifier for, 37
Television, for Canada, Marconi's Wireless Telegraph Company, Ltd., 902
Transponder Test Equipment, Marconi Instruments, Ltd., 564
Transport, Association of British Chambers of Commerce, 1066
Aircraft, Supersonic, Royal Aeronautical Society, 1006
London, Passenger, 271
Mechanism, Tape, Redifon, Ltd., 728
Reorganisation, (Leading Article, 1075)
Undertakings, Nationalised, Reorganisation of, 1079
and the Weather, T. I. Lloyd, (Letter, 838)
Transporter, Charge Face, Cranes (Dereham), Ltd., 1065
Travelling Cranes, Electric Overhead, K. E. Booth, and W. S. Cartwright, 789
Monotower, Shipyard Crane, 100-ton, Butters Brothers & Co. Limited, 385
"Trav-o-lator" or Moving Pavement, for Railway Passengers, 585
at Bank Station, Opening of the, Otis Elevator Company, Ltd., 563
Treaty, Indus Waters, 990
Trench for a Reservoir Embankment, Excavating the Cut-Off, Thyssen Shaft Sinking Company, Ltd., 668
Trends, Industrial, Federation of British Industries, 685
Trepanning and Re-Boring Lathe, Heavy, Wagner and Co., 609
Trial Trips and Launches, 40, 78, 114, 158, 213, 285, 366, 403, 441, 511, 565, 604, 643, 684, 732, 768, 811, 850, 906, 948, 1026, 1065
Trip Circuit Supervision Relays, English Electric Company, Ltd., 63
Trollies, Load Handling, Collico, Ltd., 765
Truck Bodies, Aluminium Planking for the Construction of, British Aluminium Company, 596
Dodge, 9-ton, 527
Mercedes-Benz, 527
Mixer, 4 Cubic Yard, Thos. W. Ward, Ltd., 799
and Tyre Evolution, Further, Vauxhall Motors, Ltd., 437
Tube Calibrating Mill, 688
Plugging Device, (Patent, 957)
Saw, Sir James Farmer Norton and Co. Ltd., 511
Tubeless Tyre, Plug for a Puncture in, Apaseal, Ltd., 720
Tubes, Butted, Manufacture of, (Patent, 997)
of Dissimilar Materials, Joints Between, (Patent, 167)
Vidicon, E.M.I. Electronics, Ltd., 1060
Tug, Diesel-Electric, "Llanwern", P. K. Harris and Sons, Ltd., 103
Fire-Fighting, "Keverne", John J. Thornycroft and Co. Ltd., 41
Tender for Southampton, M.V. "Gatcombe", G. W. Tripp, 243
for Newhaven, M.V. "Meeching", G. W. Tripp, 275
Tuned Damper and its Vector Diagram, G. S. Pidd, 531

TUNNELS

Great Saint Bernhard Road Tunnel, 735, 775
"Ladder" Drilling for Rock Tunnelling, Atlas Copco, Ltd., 947
Laying Submerged Tunnel Units, (Patent, 486)
Mont Blanc Road Tunnel, 478, 515
Oil Hydraulic System for Tunnelling Shields, Canada Iron Foundries, Ltd., 750
Self-Induced Ventilation of Road Tunnels, A. Ellis Hoult, (Letters, 25)
Thames to Lee Valley Water Tunnel, Metropolitan Water Board, 578
Traffic Survey for Dartford—Purfleet Tunnel, Traffic Engineering Study Group, 849
Tunnelling Machines, (Patent, 861)

Turbine Disc Slot Broaching Machine, Large, J. L. Jameson, Ltd., 494
Manufacturing Works, Hawker Siddeley Brush Turbines, Ltd., 986
Nuclear Energy, (Patent, 297)
Runaways, Steam, J. Hattingh, (Letter, 240)
Steam, Installations, Marine Propulsion, (Patent, 521)
Turbines, Gas, to Burn Wood Waste, J. L. Harrison-Smith, (Letter, 714)
Hydraulic, (Patent, 168)
Turbo-Alternators, Device for Barring, (Patent, 297)
Turbo-Charged, Two-Stroke Engine for Vehicle Use, Fodens Ltd., 528
Turbodrilling of Exploratory Bore-Holes, Ets. Neyrpic, 444
Turbo-Electric Propulsion of S.S. "Canberra", A.E.I. Heavy Plant Division, 831
Turbopump, Compact Boiler Feed, Pulsometer Engineering Company, Ltd., 1026
Turning and Boring Mill, Webster and Bennett, Ltd., 1060
Turntable in Paper Mill, Industrial, J. W. Marshall & Co., Ltd., and Bolton Turntable Company Ltd., 365
Turret Design Drilling Machine, Wickman, Ltd., 60
Drilling Machine, Alfred Herbert, Ltd., 10
Head Drilling Machine, Six-Face, with Numerical Control System, Reliance Electric and Engineering Company, 954
Lathe, Automatic, Gisholt Machine Company, 779
Lathe, Automatic, Warner and Swasey Company, 818
Lathe, Automatic Chucking, Gisholt Machine Company, 780
Lathe Equipped with Numerical Control System, Specialities Incorporated, 916
Lathe, Precision Chucking, Warner and Swasey Company, 818
Twelve-Point Headed Bolt, Standard Pressed Steel Company, 457
Twin-Camshaft Tap-Changer Assembly for Undercar Mounting, The General Electric Company, Ltd., 590
Two Aspects of Science, Sir George Thomson, 394
Part Single Action British Clearing Press, Rockwell Machine Tool Company, Ltd., 17
Roll Straightening Machine for Shafts, Th. Kieserling and Albrecht, 609
Spindle Horizontal and Vertical Milling Machine, Selson Machine Tool Company, Ltd., 14
Stroke Engine for Vehicle Use, Turbo-Charged, Fodens Ltd., 528
Stroke, Internal Combustion Engines, (Patent, 614)
Tyre, Tubeless, Plug for a Puncture in, Apaseal, Ltd., 720
Tyres, Armour for, Bray Construction Equipment, Ltd., 1061

U

U.S.S.R., Power Engineering Development and Research in, 502
Ulster, Industry in, 42
Ultrasonic Cleaner of 6 Litres Capacity, Mullard Equipment Ltd., 282
Ultrasonics in Gold Plating Process, Dawe Instruments, Ltd., 1063
Umiam Hydro-Electric Project, Assam, 991
Unconscious, Contacting the, Scientific Instrument Manufacturers' Association, (Leading Article, 864); W. D. Arnot, (Letter, 974)
Undercar Main Transformer, Associated Electrical Industries, Ltd., 591
Underfloor Wheel Lathe for Railway Vehicles, Wilhelm Hegenscheidt K.G., 687
Underground Trains, New London Transport, Cravens, Ltd., 844
Underwater Television Camera, Marconi's Wireless Telegraph Company, Ltd., 1024
Unemployment, Ministry of Labour, 42, 214, 442, 605, 769, 988
Unit-Construction Lathe, Large, Craven Brothers (Manchester), Ltd., 809
United Kingdom Mission to United States, 724
Kingdom Oil Industry, V. S. Swaminathan, 866
States, United Kingdom Mission to, 724
Universal Boring Mill with Inclined Bed, Friedrich Deckel, 569
Drafting Table with Electronic Positioning, G. Coradi, A.G., 771
Gear Shaving Machine, Semi-Automatic, Churchill Gear Machines, Ltd., 54
Head Milling Machine, Vertical, Balding Engineering, Ltd., 58
Punching and Shearing Machine, Valdarno, S.A., 993
Unloading, Aeroelastic, Suppression of, 405
Upsetting and Die Forging Machine, L. Schuler, A.G., 569
Urban Sites, Low-Powered Research Reactors on, 807
Use of the I.C.E. Conditions of Contract, Federation of Civil Engineering Contractors, 252

V

V.H.F. Communication and Navigational Aid Equipment "Sixty" Series, Marconi's Wireless Telegraph Company Ltd., 455
V.L.F. Radio Transmitter, Wood Laminate Supports in a, Permali, Ltd., 681
V.T.O.L. Flat-Rising Jet, Hawker "P.1127", 943
Vacuum Arc Melting Installations, (Patent, 653)
Booster with Mechanical Input and Output, Dunlop Rim and Wheel Company, Ltd., 722
Equipment, High, Elliott Brothers, (London) Ltd., 604
Plant, Large Scale Industrial, Symposium on Experience of, Institution of Mechanical Engineers, 906
and Pressure, Gauges Bourdon Tube, (B.S.I., 48)
Pump Set, Small, William Allday and Co., Ltd., 1025
Vulcanised Butyl Rubber Components, (B.S.I., 88)
Valuation and Rating, 907
and Rating, Federation of British Industries, 988
Value, Industrial, of D.S.I.R. Research, Water Pollution Research Laboratory, 892, 922
Actuators, Electric, Rotork Engineering Company, Ltd., 76
Valve Manufacture, Frame Grid, Mullard, Ltd., 638
Servo, Electro-Hydraulic, Keelavite Hydraulics, Ltd., 18
Tester, Taylor Electrical Instruments, Ltd., 564
Valves for Controlling Fluid Flow, (Patent, 377)
Flow Control, (Patent, 821)
High-Pressure, Diaphragm-Operated, British Arca Regulators Ltd., 440
for Industrial Heaters, Vapour-Cooled, Radio Heaters, Ltd., 946
Non-Return, (Patent, 222)
"Nuclear Clean", Cockburns, Ltd., 1064
Parallel Plug, Rotary, Peckett and Sons Ltd., 402
Reducing, Hymatic Engineering Company, Ltd., 809
Sealing, for Gas Control, (Patent, 613)
Stop, Balanced, British Ermeto Corporation, Ltd., 22
Vapour-Cooled, English Electric Valve Company, Ltd., 78
"Vanguard" Standard, with a Six-cylinder Engine, 672
Vapour-Cooled Valves, English Electric Valve Company, Ltd., 78
-Cooled Valves for Industrial Heaters, Radio Heaters, Ltd., 946
Core" Pump, Dowty Fuel Systems Ltd., 423
Variable Resistance Devices, (Patent, 47)
Speed Aggregate Blender, Frederick Parker, Ltd., 946
Speed Power Transmission Vehicle, Automatic Control of, (Patent, 262)
Speed Reduction Unit, Constant Torque, Fairbairn, Lawson, Combe, Barbour, Ltd., 112
Voltage Transformers, Improvements in, (Patent, 168)
Vector, Diagram, Tuned Damper and its, G. S. Pidd, 531
Veder Process, I.C.O.S., 698
Vehicle Control, Carbon Stack for, T. H. Lewis, Ltd., 642
Refinishing, Lewis Berger (Great Britain) Ltd., 513
"Vendor", Dennis Motors Ltd., 526
Ventilating and Heating Industry, Year Book of the, (Review, 393)
Ventilation of Road Tunnels, Self-Induced, A. Ellis Hoult, (Letter, 25)
Ventilator, Adjustable, Colt Ventilation, Ltd., 77
for Water-Closets, Morphy-Richards (Installations) Ltd., 730
Vertical Eight-Spindle Chucking Automatic, Thomas Ryder and Son, Ltd., 59
Production Milling Machine, Heavy-Duty, Midgley and Sutcliffe, Ltd., 14
Spindle Grinding Machine, Mattison Machine Works, 475
Universal Head Milling Machine, Balding Engineering, Ltd., 58
Vianden Pumped Storage Scheme, 326
Viaduct, Railway, Riou Bourdou, 817
Vibrating Feeder, Magco Ltd., 283
Vibrations, General Dynamics of, Y. Rocard, (Review, 974)
Mechanical, Theory of, Kin N. Tong, (Review, 276)
Vibratory Apparatus, (Patent, 377)
Hopper, W. R. Hamilton (Plymouth) Ltd., 154
Victoria Station and Pimlico Railway, 1860, 265
Vidicon Tubes, E.M.I. Electronics, Ltd., 1060
Visibility and Accidents, Recent Studies in, J. M. Waldram, 632
Visits, Customers', Organising, (Leading Article, 489)
Visual Glide Path Indicator, General Electric Company Ltd., 456
Vocabulary of Classical Mechanics, (Review, 143)
Volatile Detonation Inhibitor, Socony Mobile Oil Company, 46
Voltage Indicator Tube, Thermometer Type, (Patent, 127)
Volumetric Feeder for Dry Materials, Simon Handling Engineers, Ltd., 726
Vortex Flow Generated by a Sharp Leading Edge Having 65 Degrees Sweep, Some Measurements in the, N. C. Lambourne and D. W. Bryer, (Report, 806)
Voting for an Institution Merger, Institution of Civil Engineers and Institution of Municipal Engineers, (Leading Article, 655)
Vulcanised Rubber Compounds, Low Compression Set Butadiene Acrylonitrile, (B.S.I., 88)

W

Wages, Apprentices, 214
Engineering, Engineering and Allied Employers' National Federation, 949

Engineering and Shipbuilding, 142, 605, 1114
and House, Ministry of Labour, 159, 286, 404
and Industrial Relations, Edgar Allen and Co. Ltd., 286
Railway, 42
Shipbuilding, Shipbuilding Employers' Federation, 949
Wagon Handling, (Patent, 613)
Wagons, a Hundred Years of Railway Carriages and, Gloucester Railway Carriage and Wagon Company Ltd., 282
Wall Plastering Machine, Millars' Machinery, Ltd., 834
Plugs, Grippo Products Ltd., 284
Warning Lights, Indicating Instruments Having, (Patent, 221)
System, Automatic, in Southern Region, 902
Warragamba Dam, 787
Warren Spring Laboratories, New Site for, 390
Washing Facilities in Factories, Ministry of Labour, 214
Waste Heat Recovery, Latent Heat and Cooling in Diesel Engines, Diesel Engineers and Users Association, (Leading Article, 824)
Radioactive, Disposal of, 647
Treatment, Proceedings of the Symposium on the Treatment of Waste Waters, (Review, 593)
Wastes, Electroplating and Oil, Pollution from, Water Pollution Research, Laboratory, 892, 922
Water Boilers, Kinetic Experiment on, Atomics International, 571
Circulator, Temperature Control, Churchill Instrument Company, Ltd., 732
Closets, Ventilator for, Morphy-Richards (Installations) Ltd., 730
Cooled Copper Conductors, Copper Development Association, 699
Cooled Ignition Frame for Locomotives, The English Electric Company, Ltd., 591
Infusion Equipment, Richard Sutcliffe, Ltd., 731
Pollution and Industrial Tips, 502
Pollution Research in 1959, Water Pollution Research Laboratory, 36
Purifier, Small Portable, Permutit Company, Ltd., 210
Repellent Lubricant, Imperial Chemical Industries, Ltd., Nobel Division, 75
Resources Committee, River Severn, 725

WATER SUPPLY

Approved Methods for the Physical and Chemical Examination of Water, Institute of Water Engineers, (Review, 393)
Automatic Water Sampler, Elcontrol, Ltd., 905
Control of Water Resources, L. J. Cardew Wood, (Letters, 25)
How to Save Money by Saving Water, City of Birmingham Water Department, 921
Indus Waters Treaty, 990
Land Drainage and Water Supply, (Leading Article, 863)
Monitor for Recording Radio-Activity in Water, Elliott-Automation, Ltd., 806
Multiple Purpose River Basin Development, Water Resources Development in British Borneo, Federation of Malaya, Indonesia and Thailand, 280
New Water Policy Forshadowed? (Leading Article, 999); T. M. Prus-Chacinski, (Letter, 1108)
Potable Water Supply in Sealed Vehicles, General Electric Space Sciences Laboratory, 46
Problems of Water Supply, Institution of Water Engineers, 967
River Severn Water Resources Committee, 725
Second "New River" in London, Metropolitan Water Board, (Leading Article, 617)
Selset Reservoir, Tees Valley and Cleveland Water Board, 642
Spelga Dam, 108
Thames to Lee Valley Water Tunnel, Metropolitan Water Board, 578
Tryweryn Reservoir, Tarmac Civil Engineering, Ltd., 111
Warragamba Dam, 787
Water and Australia, Institution of Engineers, Australia, 289
Meter Centenary, Manchester Water Meter Company, Ltd., 973
Pollution Control in Europe, Economic Commission for Europe, 293
Supply, and Land Drainage, (Leading Article, 863)
Treatment and Effluent Exhibition and Convention, First, 681

"Watt, James", Dinner, Institution of Engineers and Shipbuilders in Scotland, (Leading Article, 656)
Waveform Generator, Test, Feedback Ltd., 321
Waveguide Devices, Electromagnetic, (Patent, 128)
Weather, Transport and the, T. I. Lloyd, (Letter, 838)
Weatherproof Switching Station, "Packaged", English Electric Company, Ltd., 904
Wedge Release Mechanism, Telescopic Friction Prop, National Coal Board Central Engineering Establishment, 113
Weight Control, Automatic, Elcontrol Ltd., 366
Recorder, Ashworth Ross & Co. Ltd., 474
Weights and Measures, (Leading Article, 824)

WELDING

Arc Welding Equipment, English Electric Company, Ltd., 906
Contact Resistance of Metal Sheet, Siemens-Schuckertwerke A.G., 952
Mobile CO2 Welding Equipment, Research and Control Instruments, Ltd., 111
Linear Accelerator 4.3MeV for Weld Inspection, Mullard Equipment, Ltd., 986
Practical Welding Repairs, C. G. Bainbridge, (Review, 429)
Shielded Arc Welding and Flame Cutting Equipment, Rubery Owen and Co., Ltd., 847
Small Spot Welding Machines, Electro Mechan-Heat, Ltd., 248
Spot Welder, Electro Mechan-Heat, Ltd., 603
Welding Gun, Portable Welders, Ltd., 811
Torch for Spot-Welding from One Side of Work, British Oxygen Company, Ltd., 721
Welding Generator Set, Lincoln Electric Company, Ltd., 37
and Machining by Electron-Beam Bombardment, United Aircraft Corporation, Hamilton Standard Division, 738
of Metals, (Patent, 1037)

Welsh Border, Railway Conversion Scheme on the, 984
West Country Foundry, Stenners of Tiverton, Ltd., 214
Wheel Hubs, Motor Car, Transfer Machine for, 1036
Lathe, Maschinenfabrik Deutschland, A.G., 608
Lathe, Railway, Craven Brothers (Manchester), Ltd., 906
Lathe, Underfloor, for Railway Vehicles, Wilhelm Hegenscheidt K.G., 687
Pairs for Locomotives and Rolling Stock (Dimensions), (B.S.I., 298)
"Standby", Dunlop Rim and Wheel Company, Ltd., 722
Wheeled Carriages for Crane Outriggers, Steels Engineering Products, Ltd., 847
Whitby, Natural Gas Supply for, North Eastern Gas Board, 552
Wide Ram Press, 100-ton, B. and S. Massey, Ltd., 22
Wideband Amplifier for Marine Transmitters, 37
Winch, Air Motor Driven, Globe Pneumatic Engineering Company Limited, 320
Trailer, Rover, C. M. Hesford and Co., Ltd., 972
Wind Forces on Multispan Roofs, J. D. Haddon, 536
Tunnel, Models, Magnetic Suspension of, Office National d'Etudes et de Recherches Aeronautiques, 607
Tunnels, High Speed, English Electric Aviation, Ltd., 676
Windscale, Advanced Gas-Cooled Reactor at, 160
Wire Bars and Billets, Automatic Bundling Machine for, Loma Manufacturing Company, 166
and Strip Forming Machines, Automatic, Heenan and Froude, Ltd., 13
Withholding of Certificates by the Engineer: The Question of Arbitration, W. H. D. Winder, 465
Wood Laminate Supports in a V.L.F. Radio Transmitter, Permali, Ltd., 681
Waste, Gas Turbines to Burn, J. L. Harrison-Smith, (Letter, 714)
Work Study, 1066
Workability of Concrete, Measuring, R. Davies and J. M. Hawkes, (Letter, 392)
Working of, Stone, Jet Flame Drilling and, Union Carbide Europa, S.A., 162
Workington Sinter Plant, Workington Iron and Steelworks, 1020
Works Heat Pump, Davey, Paxman & Co. Ltd., 250
Workshops for the Blind, Ministry of Labour, 79
World Oil Industry, British Petroleum Company Ltd., 282
Wide Communications, Satellite System for, Bell System, 518
Worm Gear Units, David Brown Industries, Ltd., 602
Wrench, Impact, Torque Controlled, Consolidated Pneumatic Tool Company Ltd., 460

X

X-ray, Pictures, Rapid Development of, Rank-Xerox, Ltd., 727
Spectrograph, Automatic, for the Determination of up to 24 Elements, C. H. F. Muller, G.m.b.H., 772
Spectrometer, Automatic, Hilger and Watts, Ltd., 948
Spectrometer for Satellite, Guided Weapons Laboratory of Bristol Aircraft, Ltd., 849
Unit, Lightweight, Pantak, Ltd., 765

Y

Youth Employment and Further Education, Crowther Report, 159

Z

"ZEBRA": Zero Energy Breeder Reactor Assembly, United Kingdom Atomic Energy Authority, 74
Zinc and Cadmium, on Iron and Steel, Electroplated Coatings of, (B.S.I., 791)
Zone Refining and Allied Techniques, N. L. Parr, (Review, 142)